Strategy #1: Plus Zero

The following section will provide practice and reinforcement with the property of zero, while working with sums to 9999. Students will practice that whenever they add zero to a number, the sum is always that number.

The
Property of

ZERO

0+980=980	3461+0=3461	0+393=393
2561+0=2561	24+0=24	2156+0=2156
1000+0=1000	0+111=111	0+15=15
37+0=37	4215+0=4215	160+0=160
0+2900=2900	10+0=10	900+0=900

What do you notice about the facts in the box above?

_____

_____

When you add 0 to a number, the sum is always that number. Try it!

236+0= ☐   1400+0= ☐   0+1212= ☐

0+981= ☐   7000+0= ☐   0+267= ☐

25+0= ☐   0+241= ☐   2490+0= ☐

Write 12 "Plus 0" facts in the box below:

☐

True OR False?

Shade the rectangles.

True – Green   False – Red

450+0=450	4000+0=40,000	0+68=680
3000+0=3000	82+0=82	4561+0=4562
711+0=711	0+9000=0	0+9999=9999
10+0=100	50+0=500	1212+0=1212

Write five "Plus 0" equations that are TRUE:

Write five "Plus 0" equations that are FALSE:

Strategy #2: Plus One

The following section will provide practice and reinforcement of plus 1 concepts.

The level begins with a brief review of adding 1 to a number between 0 and 9999. Students should already be comfortable with this concept from previous grades, but it is still important to provide review.

After the review, students will learn to use their knowledge of plus 1 concepts to add larger numbers in the 10's, 100's, and 1000's.

For example, students can relate the following four equations:

5+1 — can be related to this ... → 50+10 — ...and this... → 500+100 — ...and this. → 5000+1000
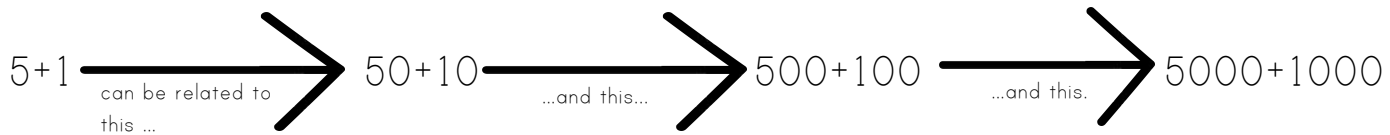
One more

NUMBER	1 MORE
3551	3552
213	
709	
1145	
42	
8965	
9	

NUMBER	1 MORE
198	
2409	
5557	
354	
86	
15	
336	

When you add 1, the sum is always **ONE MORE** than that number.

329+1= _____
↑___ 1 more than 329

110+1= _____
↑___ 1 more than 110

203+1= _____
↑___ 1 more than 203

2112+1= _____
↑___ 1 more than 2112

5262+1= _____
↑___ 1 more than 5262

59+1= _____
↑___ 1 more than 59

Let's Use **PLUS ONE**

We can use Plus 1 for other equations. Take a look at the equations below:

$2+1=3 \longrightarrow 20+10=30 \longrightarrow 200+100=300 \longrightarrow 2000+1000=3000$

$5+1=6 \longrightarrow 50+10=60 \longrightarrow 500+100=600 \longrightarrow 5000+1000=6000$

$8+1=9 \longrightarrow 80+10=90 \longrightarrow 800+100=900 \longrightarrow 8000+1000=9000$

What do you notice about the equations in the box above?

_____

_____

Fill in the blanks:

$3+1=$____ $\longrightarrow$ $30+10=$____ $\longrightarrow$ $300+100=$____ $\longrightarrow$ $3000+1000=$_____

$8+1=$____ $\longrightarrow$ $80+10=$____ $\longrightarrow$ $800+100=$____ $\longrightarrow$ $8000+1000=$_____

$4+1=$____ $\longrightarrow$ $40+10=$____ $\longrightarrow$ $400+100=$____ $\longrightarrow$ $4000+1000=$_____

$7+1=$____ $\longrightarrow$ $70+10=$____ $\longrightarrow$ $700+100=$____ $\longrightarrow$ $7000+1000=$_____

$1+1=$____ $\longrightarrow$ $10+10=$____ $\longrightarrow$ $100+100=$____ $\longrightarrow$ $1000+1000=$_____

$2+1=$____ $\longrightarrow$ $20+10=$____ $\longrightarrow$ $200+100=$____ $\longrightarrow$ $2000+1000=$_____

$6+1=$____ $\longrightarrow$ $60+10=$____ $\longrightarrow$ $600+100=$____ $\longrightarrow$ $6000+1000=$_____

$5+1=$____ $\longrightarrow$ $50+10=$____ $\longrightarrow$ $500+100=$____ $\longrightarrow$ $5000+1000=$_____

Ones, Tens, Hundreds, Thousands:
The Plus One Facts

$3+1=4$ → $30+10=40$ → $300+100=400$ → $3000+1000=4000$

3 groups
of 1

+

1 group
of 1

3 groups
of 10

+

1 group
of 10

3 groups
of 100

+

1 group
of 100

3 groups
of 1000

+

1 group of
1000
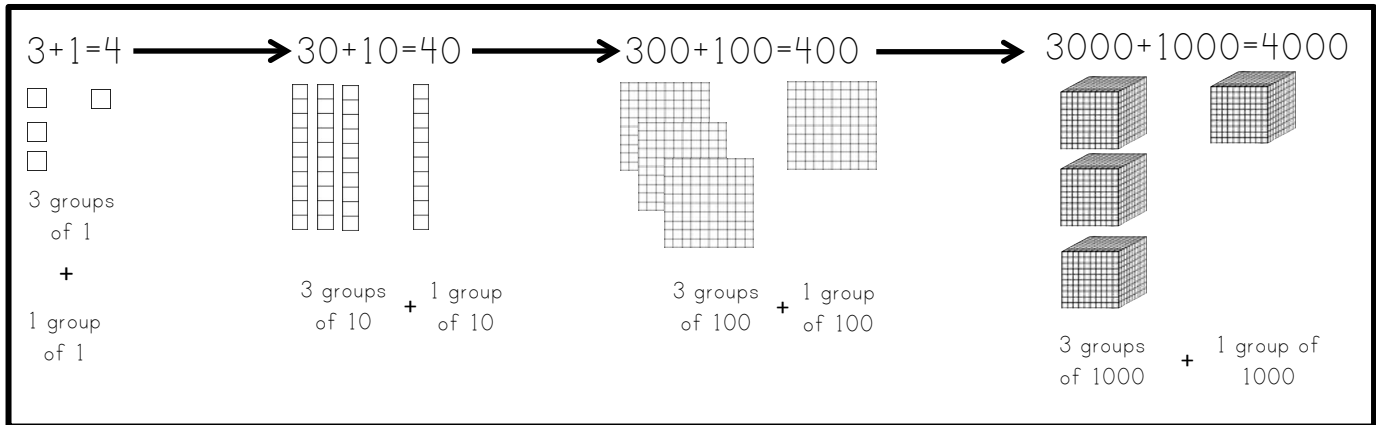
Draw base ten blocks for each equation. Then write the sum.

$6+1=$ _____

$5000+1000=$ _____

$40+10=$ _____

$200+100=$ _____

$20+10=$ _____

$7000+1000=$ _____

$300+100=$ _____

Extending the
Plus One Facts

When we see an equation like this: **700+100=_____**, we can think to ourselves, "I know that 7+1=8, so 700+100=800."

When we see an equation like this: **7000+1000=____**, we can think to ourselves, "I know that 7+1=8, so 7000+1000=8000."

Write the sum for each equation. If the sum is less than 4999, shade the box yellow. If the sum is greater than 4999, shade the box orange:

50+10=_____	8000+1000=_____	400+100=_____
9+1=_____	100+100=_____	3000+1000=_____
60+10=_____	500+100=_____	2000+1000=_____
7000+1000=_____	800+100=_____	4+1=_____
200+100=_____	30+10=_____	1000+1000=_____
700+100=_____	6000+1000=_____	70+10=_____

Putting It ALL
TOGETHER

Use the Plus 0 and Plus 1 strategies to complete each equation.

4509+ ☐ =4509   400+ ☐ =500   2000+ ☐ =3000

3980+ ☐ =3981   600+ ☐ =700   124+ ☐ =125

30+ ☐ =40   2000+ ☐ =2001   48+ ☐ =48

7982+ ☐ =7983   200+ ☐ =300   900+ ☐ =1000

450+ ☐ =450   1000+ ☐ =2000   70+ ☐ =80

615+ ☐ =616   7000+ ☐ =8000   199+ ☐ =200

Write 4 equations that use the plus 1 strategy with 100's, or 1000's:

_____ + _____ = _____   _____ + _____ = _____

_____ + _____ = _____   _____ + _____ = _____

Strategy #3: Plus Two

The following section will provide practice and reinforcement of plus 2 concepts.

The level begins with a brief review of adding 2 to a number between 0 and 9998. Students should already know this from previous grades, but it is still important to provide review.

After the review, students will learn to use their knowledge of plus 2 concepts to add larger numbers in the 10's, 100's, and 1000's.

For example, students can relate the following four equations:

$5+2$ ⟶ (can be related to this …) $50+20$ ⟶ (…and this…) $500+200$ ⟶ (…and this.) $5000+2000$
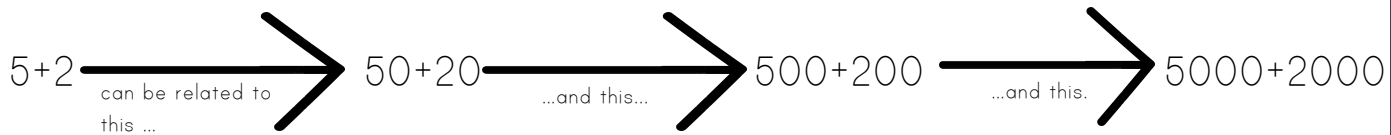
Two more

NUMBER	2 MORE
3482	3484
2446	
314	
25	
509	
4713	
1000	

NUMBER	2 MORE
365	
89	
7	
1703	
250	
567	
9003	

When you add 2, the sum is always **TWO MORE** than that number.

3490+2=_____
↑ 2 more than 3490

600+2=_____
↑ 2 more than 600

398+2=_____
↑ 2 more than 398

225+2=_____
↑ 2 more than 225

1314+2=_____
↑ 2 more than 1314

87+2=_____
↑ 2 more than 87

Let's Use **PLUS TWO**

We can use Plus 2 for other equations. Take a look at the equations below:

$5+2=7 \rightarrow 50+20=70 \rightarrow 500+200=700 \rightarrow 5000+2000=7000$

$3+2=5 \rightarrow 30+20=50 \rightarrow 300+200=500 \rightarrow 3000+2000=5000$

$6+2=8 \rightarrow 60+20=80 \rightarrow 600+200=800 \rightarrow 6000+2000=8000$

What do you notice about the equations in the box above?

_____

_____

Fill in the blanks:

$3+2=$____ $\rightarrow$ $30+20=$____ $\rightarrow$ $300+200=$____ $\rightarrow$ $3000+2000=$____

$5+2=$____ $\rightarrow$ $50+20=$____ $\rightarrow$ $500+200=$____ $\rightarrow$ $5000+2000=$____

$4+2=$____ $\rightarrow$ $40+20=$____ $\rightarrow$ $400+200=$____ $\rightarrow$ $4000+2000=$____

$7+2=$____ $\rightarrow$ $70+20=$____ $\rightarrow$ $700+200=$____ $\rightarrow$ $7000+2000=$____

$1+2=$____ $\rightarrow$ $10+20=$____ $\rightarrow$ $100+200=$____ $\rightarrow$ $1000+2000=$____

$2+2=$____ $\rightarrow$ $20+20=$____ $\rightarrow$ $200+200=$____ $\rightarrow$ $2000+2000=$____

$6+2=$____ $\rightarrow$ $60+20=$____ $\rightarrow$ $600+200=$____ $\rightarrow$ $6000+2000=$____

$5+2=$____ $\rightarrow$ $50+20=$____ $\rightarrow$ $500+200=$____ $\rightarrow$ $5000+2000=$____

Ones, Tens, Hundreds, Thousands:
The Plus Two Facts

$3+2=5$ → $30+20=50$ → $300+200=500$ → $3000+2000=5000$

3 groups of 1

+

2 groups of 1

3 groups of 10 + 2 groups of 10

3 groups of 100 + 2 groups of 100

3 groups of 1000 + 2 groups of 1000
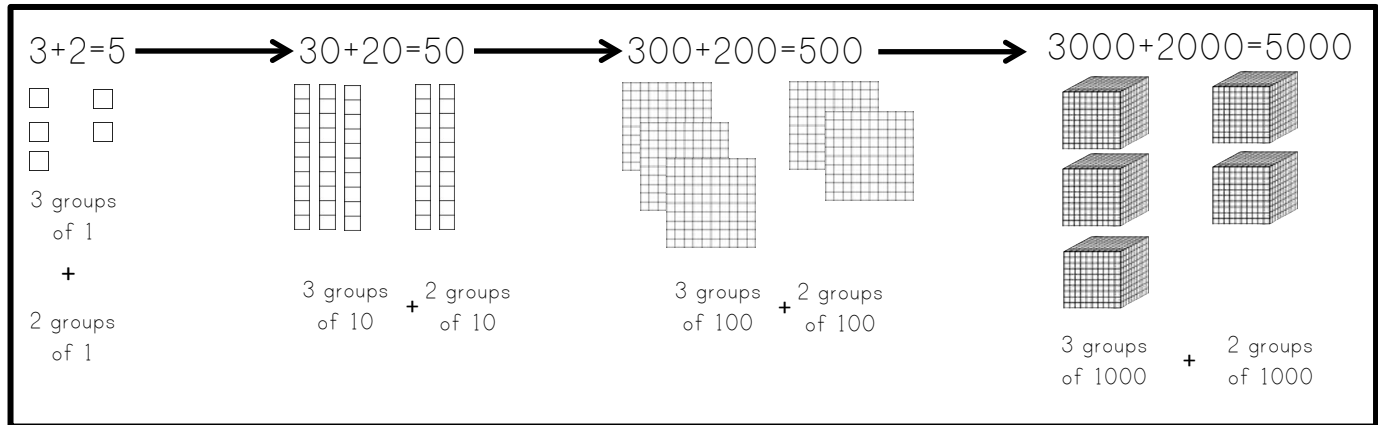
Draw base ten blocks for each equation. Then write the sum.

$4+2=$_____

$3000+2000=$_____

$30+20=$_____

$500+200=$_____

$20+20=$_____

$6000+2000=$_____

$700+200=$_____

Extending the
Plus Two Facts

When we see an equation like this: $400+200=$___, we can think to ourselves, "I know that 4+2=6, so 400+200=600."

When we see an equation like this: $4000+2000=$___, we can think to ourselves, "I know that 4+2=6, so 4000+2000=6000."

Write the sum for each equation. If the sum is less than 4999, shade the box light blue. If the sum is greater than 4999, shade the box red:

60+20=_____	1000+2000=_____	3000+2000=_____
4000+2000=_____	500+200=_____	5000+2000=_____
700+200=_____	200+200=_____	7000+2000=_____
400+200=_____	50+20=_____	30+20=_____
300+200=_____	100+200=_____	6000+2000=_____
2000+2000=_____	900+200=_____	80+20=_____

Graph It!

Cut out each equation. Paste it onto the graph.

Sums between 0 and 1999	Sums between 2000 and 3999	Sums between 4000 and 5999	Sums between 6000 and 7999	Sums between 8000 and 9999

Sum

600+200	8000+1000	4568+2	6050+0	498+2
3000+2000	2369+2	7000+1000	300+200	6578+2
2000+1000	60+20	9756+2	6000+1000	3000+1000

Strategy #4: Plus Three

The following section will provide practice and reinforcement of plus 3 concepts.

The level begins with a brief review of adding 3 to a number between 0 and 9997. Students should already know this from previous grades, but it is still important to provide review.

After the review, students will learn to use their knowledge of plus 3 concepts to add larger numbers in the 10's, 100's, and 1000's.

For example, students can relate the following 4 equations:

$5+3$ *can be related to this ...*   ➔ $50+30$ *...and this...*   ➔ $500+300$ *...and this.*   ➔ $5000+3000$
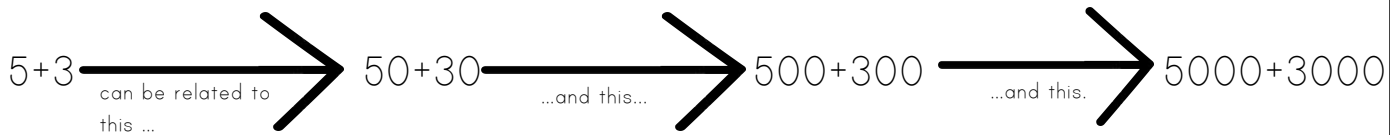
PLUS THREE

Let's review the plus three strategy:

$105 +$ [dice: 3] $= \underline{108}$

↑ Say, "105."

↑ Use the dots to count up. Say, "106, 107, 108.."

OR

Think to yourself, "Which number is 3 more than 105?"

Use the dots to count on.

$176 +$ [dice] $= \underline{\hphantom{000}}$

$78 +$ [dice] $= \underline{\hphantom{000}}$

$3908 +$ [dice] $= \underline{\hphantom{000}}$

$209 +$ [dice] $= \underline{\hphantom{000}}$

$700 +$ [dice] $= \underline{\hphantom{000}}$

$450 +$ [dice] $= \underline{\hphantom{000}}$

$1176 +$ [dice] $= \underline{\hphantom{000}}$

$6900 +$ [dice] $= \underline{\hphantom{000}}$

$8429 +$ [dice] $= \underline{\hphantom{000}}$

$2000 +$ [dice] $= \underline{\hphantom{000}}$

$376 +$ [dice] $= \underline{\hphantom{000}}$

$772 +$ [dice] $= \underline{\hphantom{000}}$

$9830 +$ [dice] $= \underline{\hphantom{000}}$

$27 +$ [dice] $= \underline{\hphantom{000}}$

$99 +$ [dice] $= \underline{\hphantom{000}}$

Find the sums:

$3476 + 3 = \underline{\hphantom{000}}$

$567 + 3 = \underline{\hphantom{000}}$

$4500 + 3 = \underline{\hphantom{000}}$

$1001 + 3 = \underline{\hphantom{000}}$

$400 + 3 = \underline{\hphantom{000}}$

$34 + 3 = \underline{\hphantom{000}}$

$2375 + 3 = \underline{\hphantom{000}}$

$4000 + 3 = \underline{\hphantom{000}}$

$2734 + 3 = \underline{\hphantom{000}}$

$800 + 3 = \underline{\hphantom{000}}$

$1999 + 3 = \underline{\hphantom{000}}$

$100 + 3 = \underline{\hphantom{000}}$

Let's Use **PLUS THREE**

Just like Plus 1 and Plus 2, we can use Plus 3 for other equations. Take a look at the equations below:

2+3=5 $\longrightarrow$ 20+30=50 $\longrightarrow$ 200+300=500 $\longrightarrow$ 2000+3000=5000

6+3=9 $\longrightarrow$ 60+30=90 $\longrightarrow$ 600+300=900 $\longrightarrow$ 6000+3000=9000

5+3=8 $\longrightarrow$ 50+30=80 $\longrightarrow$ 500+300=800 $\longrightarrow$ 5000+3000=8000

How is the Plus 3 strategy similar to the Plus 1 and Plus 2 strategies?

_____

_____

Fill in the blanks:

3+3=____ $\longrightarrow$ 30+30=_____ $\longrightarrow$ 300+300=_____ $\longrightarrow$ 3000+3000=_____

2+3=____ $\longrightarrow$ 20+30=_____ $\longrightarrow$ 200+300=_____ $\longrightarrow$ 2000+3000=_____

4+3=____ $\longrightarrow$ 40+30=_____ $\longrightarrow$ 400+300=_____ $\longrightarrow$ 4000+3000=_____

6+3=____ $\longrightarrow$ 60+30=_____ $\longrightarrow$ 600+300=_____ $\longrightarrow$ 6000+3000=_____

1+3=____ $\longrightarrow$ 10+30=_____ $\longrightarrow$ 100+300=_____ $\longrightarrow$ 1000+3000=_____

5+3=____ $\longrightarrow$ 50+30=_____ $\longrightarrow$ 500+300=_____ $\longrightarrow$ 5000+3000=_____

Extending the
Plus Three Facts

Now that you know how to extend the Plus 1 and Plus 2 facts, extending the Plus 3 facts is easy! Let's practice!

Write the sum for each equation. Circle the equation that was the most difficult to figure out. Shade in the box for the equation that was the easiest.

100+300=_____	800+300=_____	4000+3000=_____
50+30=_____	200+300=_____	2000+3000=_____
20+30=_____	500+300=_____	300+300=_____
6000+3000=_____	40+30=_____	1000+3000=_____

Solve the problems. Show your work for each one.

The play structure costs $6000. A swing set costs $3000. How much does it cost for the play structure and swing set altogether?

There are 400 people at the concert. There are still 300 empty seats. How many seats are at the concert in all?

Putting It All
TOGETHER

Use the strategies that you have learned so far to solve the equations.

3000+3=

3256+1=

40+20=

400+100=

4445+2=

50+30=

300+100=

5490+3=

7000+1000=

6000+2000=

0+9899=

600+300=

40+30=

3000+2000=

4000+3000=

8000+1000=

200+200=

3490+0=

1002+2=

70+20=

Bonus Activity - Teacher Instructions

Include this activity at the end of Level 4 in your Addition Station.

This activity integrates the strategies that students have already learned: +0, +1, +2, and +3.

Overview:

In this Bonus Activity, students choose a task card, add the numbers, and record the equations in their notebook or on the recording sheet.
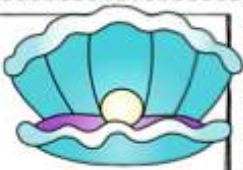
Preparation:

- Print and laminate task cards.
- Make copies of recording sheets (you may wish to have students record the answers in their notebooks instead).
- To set these up, I typically cut out the title and directions and paste them on either side of a piece of cereal box cardboard. I store the center pieces in small re-sealable bags, and then keep everything in a large re-sealable bag. I've made a video showing how I make and store the center pieces that you can watch by clicking here:

  https://www.youtube.com/watch?v=Z4EKxxCYnjo&feature=youtu.be

Scuba Diver Addition

Math Center

50+30

80

Directions

Choose a scuba diver card. Read the equation and find the matching sum on a seashell card. Place the two cards together and record the equations on the recording sheet.

50+30

80
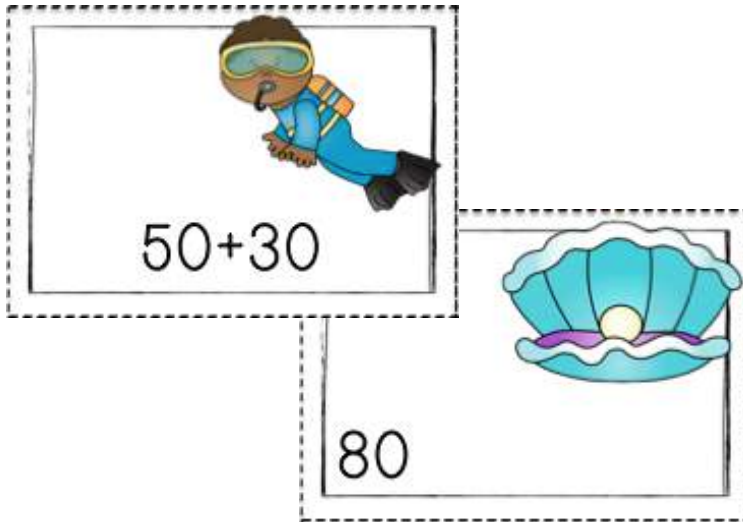
1298+0

2349+1

1+8700

40+10

900+100

3000+1000

70+90

300+200

900+200

500+200

6000+2000

4000+2000

1000+2000

3455+3

7808+3

2101+3

40+30

70+30

50+30

200+300

800+300
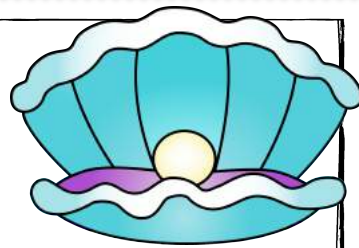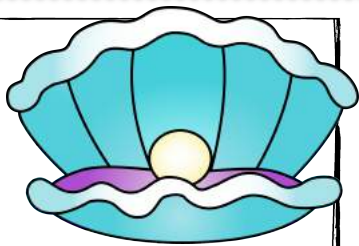
900+300

3000+3000

6000+3000
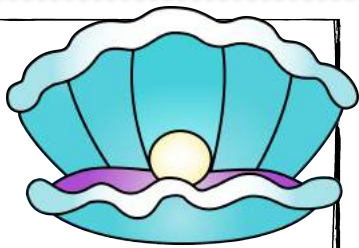
1298

2350

8701
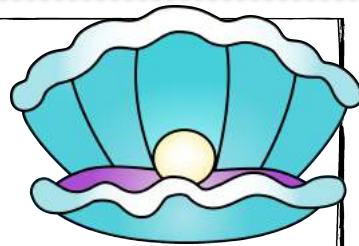
50
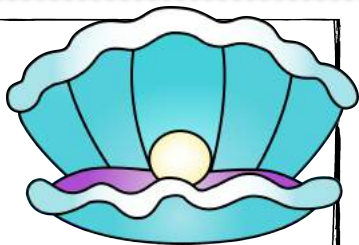
1000
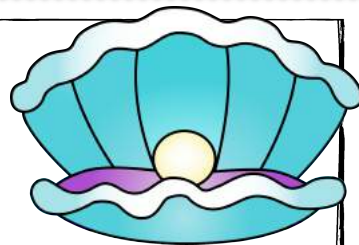
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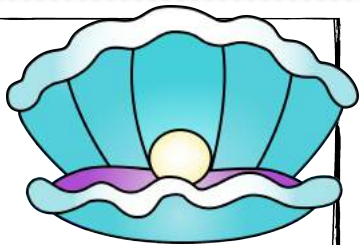
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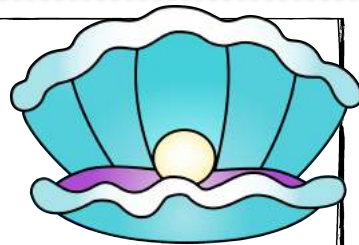
500
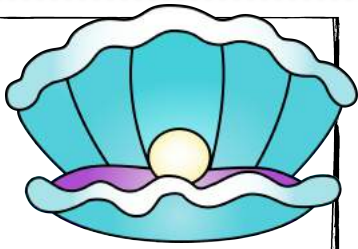
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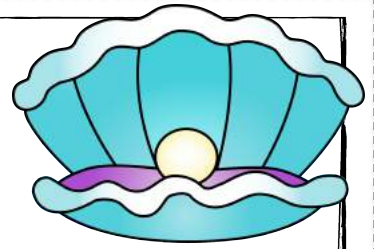
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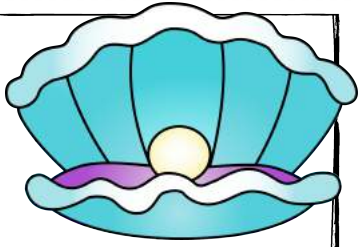
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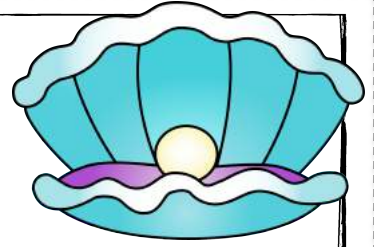
6000
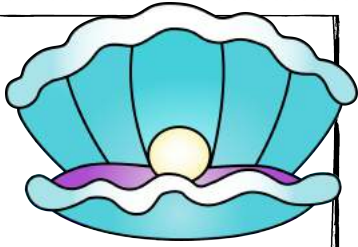
3000
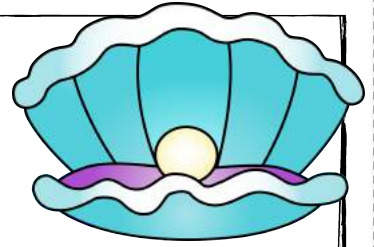
3458
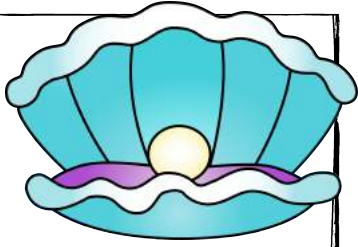
7811
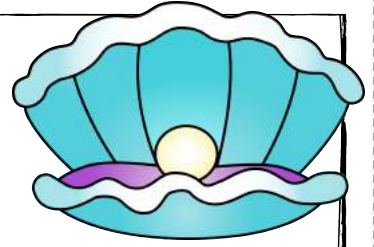
2104
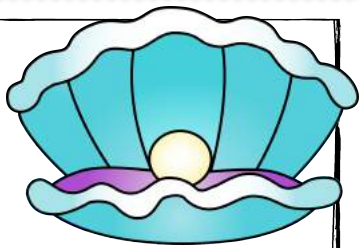
70
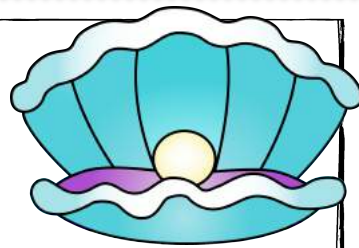
100
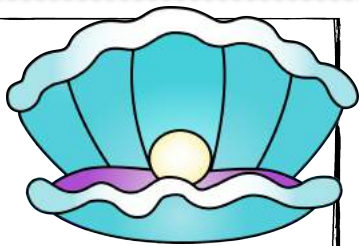
80
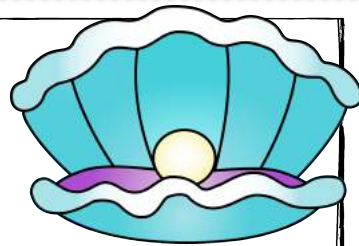
500
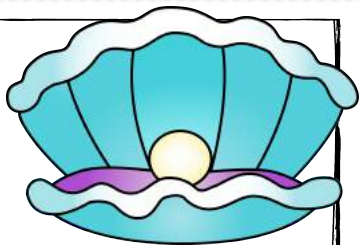
1100
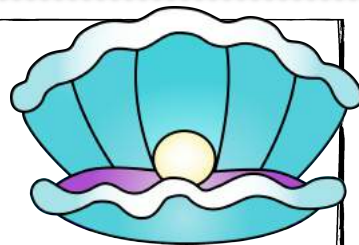
1200

6000

9000

Recording Sheet

Record the addends and sum for each equation.

Addend	Addend	Sum

Addend	Addend	Sum

Strategy #5: Doubles

In this section, students will practice the doubles facts. By this time, students should have received instruction and practice (in previous grades) for the doubles facts. However, it is important to note that some students will still not have developed automaticity.

For the basic doubles facts (2+2, 4+4, 5+5, etc), memorization should be a goal. It is important to provide time to practice this in your classroom.

After this level's brief review of doubles to 12, students will use their knowledge in order to extend the doubles equations to larger numbers in the 10's, 100's, and 1000's.

For example, students can relate the following four equations:

$$4+4 \xrightarrow{\text{can be related to this ...}} 40+40 \xrightarrow{\text{...and this...}} 400+400 \xrightarrow{\text{...and this.}} 4000+4000$$

This gets more difficult with equations such as the following (students will not work with equations that have a sum greater than 10,000, such as 6000+6000):

$$6+6 \xrightarrow{\text{can be related to this..}} 60+60 \xrightarrow{\text{...and this.}} 600+600$$

Let's Practice the
Doubles Facts

🎲 + 🎲 = _____	🎲 + 🎲 = _____
🎲 + 🎲 = _____	🎲 + 🎲 = _____
🎲 + 🎲 = _____	🎲 + 🎲 = _____
🎲 + 🎲 = _____	🎲 + 🎲 = _____
🎲 + 🎲 = _____	🎲 + 🎲 = _____
🎲 + 🎲 = _____	🎲 + 🎲 = _____
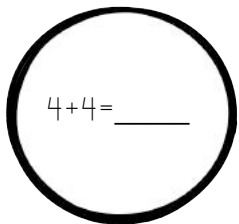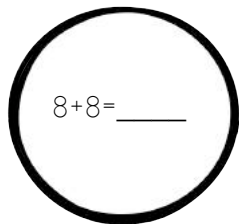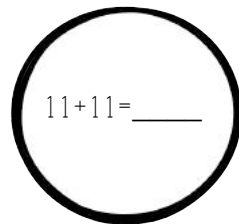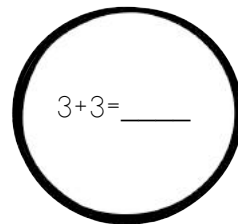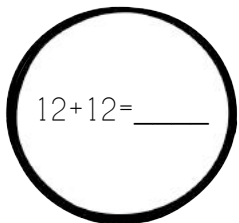
Solve the doubles equations. If the sum is less than 15, shade the circle yellow. If the sum is greater than 15, shade the circle red.

4+4=_____

8+8=_____

11+11=_____

3+3=_____

12+12=_____

1+1=_____

6+6=_____

9+9=_____

5+5=_____

10+10=_____

2+2=_____

7+7=_____
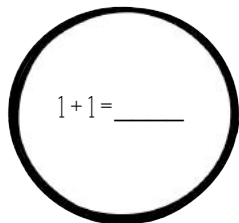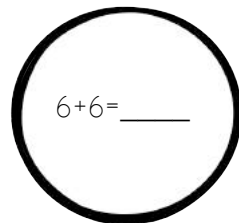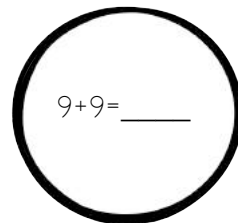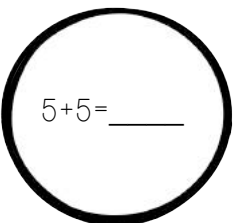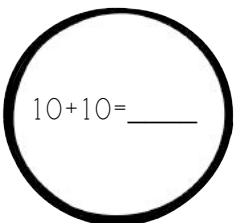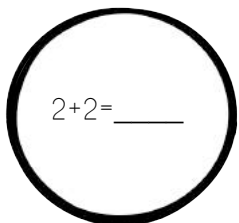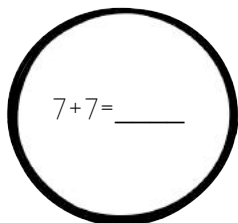
Doubles **Fun**

Complete the doubles wheel:

The Double of

1 2 3 4 5 6 7 8 9 10 11 12
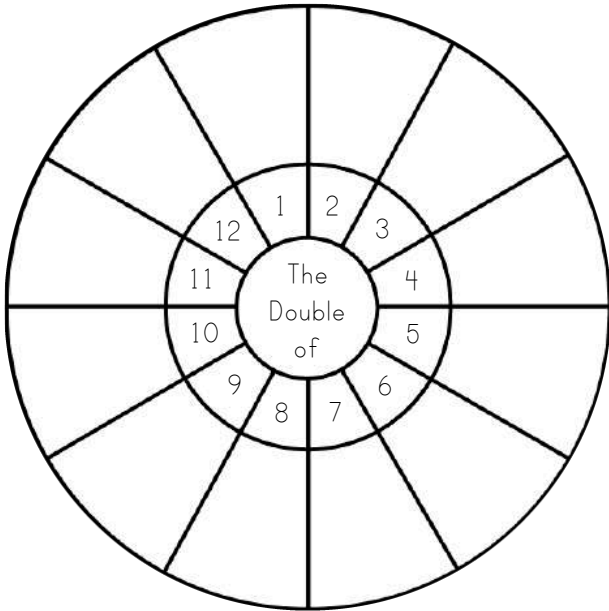
Fill in the missing addends:

____ + ____ = 24   ____ + ____ = 6

____ + ____ = 8   ____ + ____ = 20

____ + ____ = 16   ____ + ____ = 14

____ + ____ = 2   ____ + ____ = 12

____ + ____ = 22   ____ + ____ = 4

____ + ____ = 10   ____ + ____ = 18

Solve the problems. Remember to show your work.

There are 12 eggs in one carton. How many eggs are in 2 cartons? How about 4 cartons?

Each truck has 4 wheels. How many wheels are on 2 trucks? How about 4 trucks?

Extending The Doubles

We have practiced "extending" in other levels, like Plus 1, Plus 2, and Plus 3. Now let's practice extending the doubles facts!

4+4=8 ➡	40+40=80 ➡	400+400=800 ➡	4000+4000=8000
2+2=4 ➡	20+20=40 ➡	200+200=400 ➡	2000+2000=4000

Solve the equations:

3000+3000=_____   9+9=_____   1000+1000=_____

20+20=_____   2000+2000=_____   50+50=_____

400+400=_____   300+300=_____   80+80=_____

200+200=_____   100+100=_____   4000+4000=_____

Some doubles are more difficult to extend. Let's take a look:

8+8=16 ➡ 800+800=1600

⬆

Think: "8 groups of 100 + 8 groups of 100 makes 16 groups of 100."

Solve the equations. Circle the ones that you find difficult.

600+600=_____   80+80=_____   9+9=_____

90+90=_____   700+700=_____   70+70=_____

500+500=_____   8+8=_____   20+20=_____

DOUBLES PRACTICE

Complete each equation:

500+_____=1000	60+60=_____	_____+3000=6000
_____+10=20	800+_____=1600	200+_____=400
2000+_____=4000	400+400=_____	_____+50=100
_____+20=40	1000+_____=2000	70+_____=140
_____+900=1800	10+_____=20	100+_____=200
300+_____=600	700+700=_____	_____+4000=8000
_____+30=60	8+_____=16	900+_____=1800

Solve the problem:

There are 4000 books in the library. The librarian, Mrs. Smith, would like to double her collection. How many books does Mrs. Smith want to have in the library altogether?

Putting It All Together:
Bubble Gum Addition

1000+4000=	3000+2=	2980+3=	30+20=	0+2100=
50+20=	3000+4000=	30+30=	8000+1000=	2000+3000=
3349+1=	700+700=	765+0=	2+459=	3+6874=
600+100=	40+30=	500+500=	700+200=	2454+1=
	70+10=	3000+3000=	1000+2000=	100+500=
	4000+4000=	300+200=	40+10=	50+30=
	2000+4000=	30+90=	1000+2000=	7000+2000=
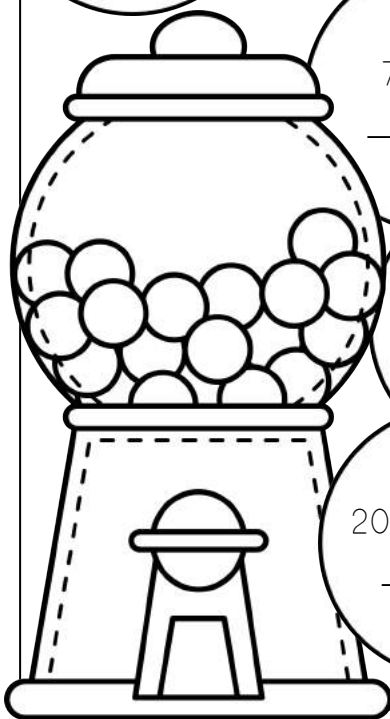
Strategy #6: Doubles Plus One

In this section, students will practice the doubles plus one facts. Students have probably already learned this concept in other grades. However, it is important to re-teach and reinforce to ensure that all students have the chance to review and master it. In order to experience success with the doubles plus one facts, students must have mastered the doubles facts. If they have not, provide time for them to do so.

For the doubles plus one facts, students think of the double and then add one more. For example, for 4+5, think: "4+4=8 and one more makes 9."

After this level's activities with doubles plus one facts to 12, students will use their knowledge in order to extend the doubles plus one equations to larger numbers in the 10's, 100's, and 1000's.

For example, students can relate the following four equations:

4+5 —— can be related to this … —→ 40+50 —— …and this… —→ 400+500 —— …and this. —→ 4000+5000
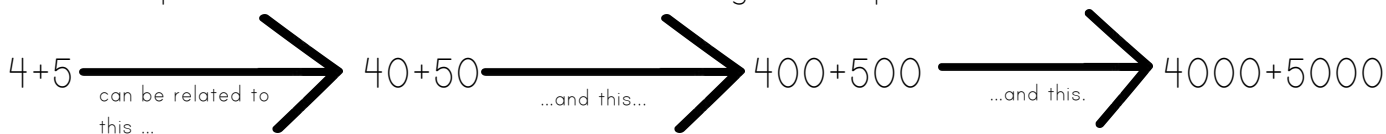
Students will not work with equations that have a sum greater than 10,000, such as 6000+7000.

The Double...Plus One More!

When you see addends that differ by 1, you can use the doubles plus one strategy.

Example

3+4

← Think: "3+3=6 and 1 more makes 7."

3+4=7

Now it's your turn!

7+8

← Think: "7+7=_____ and 1 more makes _____."

7+8=_____

5+6

← Think: "5+5=_____ and 1 more makes _____."

5+6=_____

9+10

← Think: "9+9=_____ and 1 more makes _____."

9+10=_____

2+3

← Think: "2+2=_____ and 1 more makes _____."

2+3=_____

8+9

← Think: "8+8=_____ and 1 more makes _____."

8+9=_____

1+2

← Think: "1+1=_____ and 1 more makes _____."

1+2=_____

3+4

← Think: "3+3=_____ and 1 more makes _____."

3+4=_____

10+11

← Think: "10+10=_____ and 1 more makes _____."

10+11=_____

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Let's Practice the Doubles Plus One Facts

8+9= _____

3+4= _____

10+9= _____

11+12= _____

1+2= _____

4+3= _____

7+8= _____

9+10= _____

12+11= _____

5+4= _____

5+6= _____

10+11= _____

9+8= _____

2+3= _____

8+7= _____

The double of 2 plus one more.

5

12 1
11 2
10 3
The Double +1
9 4
8 5
7 6
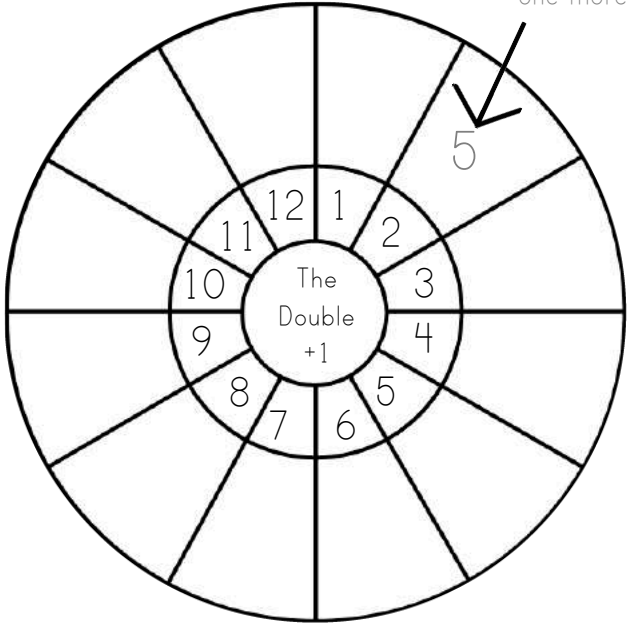
Write a story problem for the equation 8+9.

_____

_____

_____

_____

_____

Now solve the problem:

Which doubles +1 equations do you find the most difficult?

Extending
the Doubles Plus One Facts

Just like you've learned to "extend" the other facts, now you can extend the doubles plus one facts to work with higher numbers. Try it!

Think: "2+3=5, so 200+300=?" →
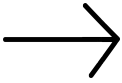
200+300= _____

9+10=_____

3000+4000= _____

70+80=_____

100+200=_____

5+6=_____

800+900= _____

40+50=_____

50+60=_____

80+90=_____

11+12=_____

300+400=_____

60+70=_____

1000+2000= _____

400+500=_____

8+9=_____

4000+5000= _____

30+40=_____

600+700=_____

20+30=_____

10+11=_____

90+100=_____

2000+3000= _____

Choose the **Strategy**

Choose the best strategy for each equation.

30+40=_____

Which strategy works best:
doubles plus one or plus 3?

_____

2000+2000=_____

Which strategy works best:
doubles or plus two?

_____

200+100=_____

Which strategy works best:
doubles plus one or plus 2?

_____

Explain how you solved each equation:

9000+3000=_____

_____

_____

_____

80+80=_____

_____

_____

_____

10+11=_____

_____

_____

_____

500+400=_____

_____

_____

_____

Explain how the doubles plus one strategy works.

_____

_____

List 4 equations that you could use the doubles plus one strategy for:

Put It Together Cut-and-Paste 6-E

Cut out the sums and paste them beside each equation. Use any of the strategies that you have learned so far.

50+20=	300+500=	50+50=
800+100=	700+200=	50+10=
90+30=	600+600=	6000+3000=
500+200=	1122+0=	12+12=

- -

| 120	900	24	700	800	60
1122	100	9000	1200	70	900
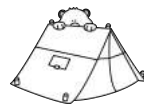
Strategy #7: Doubles Plus Two

In this section, students will practice the doubles plus two strategy. Students have probably already learned this concept in other grades. However, it is important to re-teach and reinforce to ensure that all students have the chance to review and master it. In order to experience success with the doubles plus one facts, students must have mastered the doubles facts. If they have not, provide time for them to do so.

For the doubles plus two facts, students think of the double and then add two more. For example, for 3+5, think: "3+3=6 and two more makes 8."

After this level's activities with doubles plus two facts to 12+14, students will use their knowledge in order to extend the doubles plus two equations to larger numbers in the 10's, 100's, and 1000's.

For example, students can relate the following four equations:

3+5 — can be related to this … → 30+50 — …and this… → 300+500 — …and this. → 3000+5000
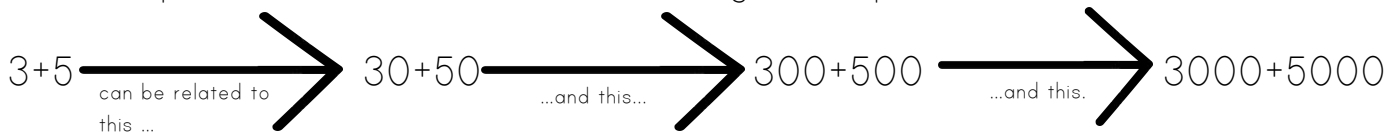
Students will not work with equations that have a sum greater than 9999, such as 5000+7000.

The Double...Plus TWO More!

When you see addends that differ by 2, you can use the doubles plus two strategy.

Example

5+7

← Think: "5+5=10 and 2 more makes 12."

5+7=12

Now it's your turn!

7+9

← Think: "7+7=_____ and 2 more makes _____."

7+9=_____

5+7

← Think: "5+5=_____ and 2 more makes _____."

5+7=_____

9+11

← Think: "9+9=_____ and 2 more makes _____."

9+11=_____

2+4

← Think: "2+2=_____ and 2 more makes _____."

2+4=_____

8+10

← Think: "8+8=_____ and 2 more makes _____."

8+10=_____

1+3

← Think: "1+1=_____ and 2 more makes _____."

1+3=_____

3+5

← Think: "3+3=_____ and 2 more makes _____."

3+5=_____

10+12

← Think: "10+10=_____ and 2 more makes _____."

10+12=_____

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Let's Practice the Doubles Plus Two Facts

10+12=_____

1+3=_____

5+7=_____

3+5=_____

8+10=_____

6+8=_____

7+5=_____

4+6=_____

12+14=_____

9+11=_____

9+7=_____

2+4=_____

11+13=_____

7+9=_____

6+4=_____

The double of 2 plus two more.

6

| The Double +2 |
| 12 1 |
| 11 2 |
| 10 3 |
| 9 4 |
| 8 5 |
| 7 6 |
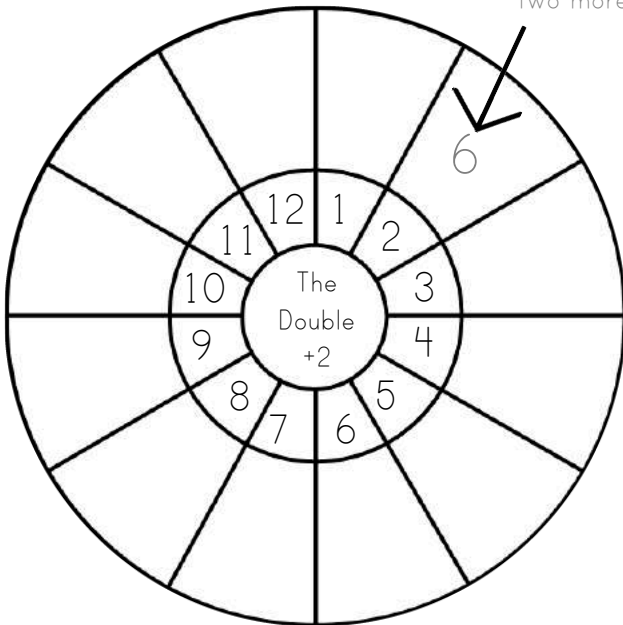
Write a story problem for the equation 12+14.

_____

_____

_____

_____

Now solve the problem:

Which doubles +2 equations do you find the most difficult?

Extending
the Doubles Plus TWO Facts

Just like you've learned to "extend" the other facts, now you can extend the doubles plus TWO facts to work with higher numbers. Try it!

Think: "3+5=8, so 3000+5000=?
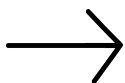
3000+5000=
_____
{3 groups of 1000 + 5 groups of 1000}

500+700=
_____

10+12=_____

700+900=____

2000+4000=
_____

400+600=____

12+14=____

80+100=____

1000+3000=
_____

70+90=____

40+60=____

5000+3000=
_____

90+110=_____
{Think: 9 groups of 10 + 11 groups of 10}

300+500=____

60+80=____

4000+2000=
_____

600+800=____

100+300=____

11+13=____

200+400=____

500+300=____

800+600=____

9+11=____

Effective AND Efficient

When we choose a strategy to use, it should be EFFECTIVE (works well) and EFFICIENT (it helps us get the answer quickly). Which strategy do you think is the most effective and efficient?

Explain how you would solve 4000+2000 using the Plus 2 strategy:

_____

_____

Explain how you would solve 4000+2000 using the Doubles Plus 2 strategy:

_____

_____

Which strategy is the most EFFECTIVE and EFFICIENT? _____

_____

Explain how you would solve 3000+3000 using the Doubles strategy:

_____

_____

Explain how you would solve 3000+3000 using the Plus 3 strategy:

_____

_____

Which strategy is the most EFFECTIVE and EFFICIENT? _____

_____

Solve these equations using the most EFFECTIVE and EFFICIENT strategy.

600+800=_____   30+10=_____   700+700=_____

2000+4000=_____   700+200=_____   20+40=_____

100+300=_____   4000+2000=_____   500+700=_____

500+500=_____   300+500=_____   110+90=_____

Putting IT ALL Together

Use any of the strategies that you have learned to complete these activities.

Write a greater than (>), less than (<), or equal sign (=).

5000+4000 ☐ 5898+2	40+50 ☐ 80+10	600+600 ☐ 600+700
300+300 ☐ 200+400	800+800 ☐ 1000+1000	60+30 ☐ 40+60
4000+3000 ☐ 300+400	295+3 ☐ 2+297	1978+1 ☐ 100+100
0+578 ☐ 500+100	1000+2000 ☐ 1900+1	5000+2000 ☐ 3000+3000
1000+2000 ☐ 2900+3	500+500 ☐ 999+1	100+300 ☐ 300+500

Fill in the missing number for each equation. Use any of the strategies that you have learned so far.

Row 1:
- 4000 → 2000, ☐
- 7212 → ☐, 7209
- 1600 → 800, ☐
- 900 → 300, ☐

Row 2:
- 6000 → 2000, ☐
- 2000 → 1000, ☐
- 9900 → ☐, 3
- ☐ → 200, 900

Row 3:
- 6579 → 0, ☐
- 9000 → 7000, ☐
- 4000 → ☐, 3000
- 1800 → 800, ☐

Row 4:
- 800 → 400, ☐
- 5689 → ☐, 2
- 800 → ☐, 300
- 6780 → 3, ☐

Strategy #8: Making 10, 100, and 1000

Making Ten is all about knowing the number combinations that can be added together to make ten. Ideally, we want students to move away from "counting on" and simply KNOW the number combinations that add to ten. For example, when a student sees 7+3, he could think, "7...8, 9, 10" and get the correct answer. But it is even better if he looks at 7+3 and automatically KNOWS that the sum is 10 without even counting on. By Grade 4, students should already know their number combinations that add to 10, but some might not have memorized them yet. It is important that students are given the time that they need to practice, as these skills will be used forever.

Making 100 is an extension of Making 10. When students know that 7+3=10, they will learn that 70+30=100.

Making 1000 is a natural extension of Making 10 and Making 100. When students know that 7+3=10, they will learn that 700+300=1000.

This level will provide lots of practice with these equations so that students will build automaticity with the number combinations adding to 10, 100, and 1000.

Making TEN

Fill in the missing addend for each "Making 10" equation.

```
      10                10                10                10
     /  \              /  \              /  \              /  \
   [6] [  ]        [  ] [5]          [0] [  ]          [9] [  ]

      10                10                10                10
     /  \              /  \              /  \              /  \
   [3] [  ]        [8] [  ]         [10] [  ]          [2] [  ]

      10                10                10
     /  \              /  \              /  \
   [1] [  ]        [4] [  ]          [7] [  ]
```
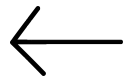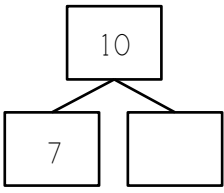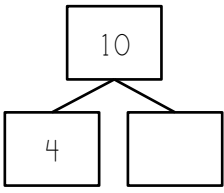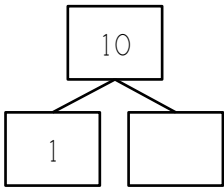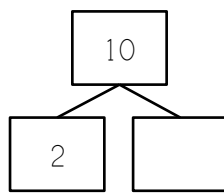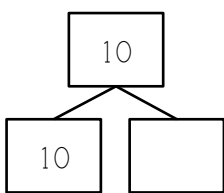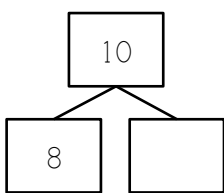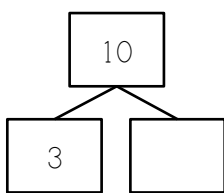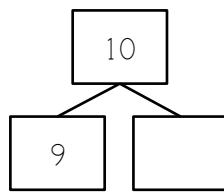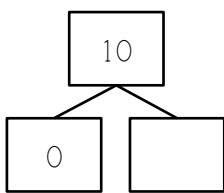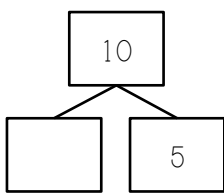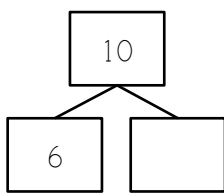
[□□□□□□□□□□] ← This is a group of 10. Draw ones blocks to show how you could split up this group of 10 in four different ways.

____ + ____ = 10	____ + ____ = 10	____ + ____ = 10	____ + ____ = 10

Making 100

Now that you know the number combinations that add to 10, you can use similar combinations to make 100!

EXAMPLE

7+3=10 ━━━━━━━━━━➤ 70+30=100

7 ones + 3 ones   7 groups of 10 + 3 groups of 10

Try it!

3+7=_____ ━━➤ 30+70=_____   5+5=_____ ━━➤ 50+50=_____

8+2=_____ ━━➤ 80+20=_____   4+6=_____ ━━➤ 40+60=_____

9+1=_____ ━━➤ 90+10=_____   2+8=_____ ━━➤ 20+80=_____

Fill in the unknown numbers:

1+9=_____	0+10=_____
80+_____=100	20+_____=100
_____+6=10	_____+7=10
50+50=_____	100+0=_____
7+_____=10	5+_____=10
_____+40=100	_____+8=10
30+70=_____	90+10=_____
8+_____=10	40+_____=100
_____+4=10	_____+90=100
_____+30=100	_____+100=100

Dan and Fran went camping. It took them 20 minutes to set up their tent, and 80 minutes to make supper. Altogether, how many minutes did it take them to set up their tent and make supper?

Altogether there are 100 people at the football game. 30 of them are parents and the rest are kids. How many kids are at the football game?

---

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Making 1000

Now that you have practiced the number combinations that add to 10 and 100, you can use similar combinations to make 1000!

EXAMPLE

$7+3=10$ → $70+30=100$ → $700+300=1000$

7 ones + 3 ones

7 groups of 10 + 3 groups of 10

7 groups of 100 + 3 groups of 100

Try it!

$200+$_____$=1000$ $600+$_____$=1000$ $700+$_____$=1000$

$0+$_____$=1000$ $100+$_____$=1000$ $800+$_____$=1000$

$500+$_____$=1000$ $400+$_____$=1000$ $300+$_____$=1000$

Fill in the unknown numbers:

$10+90=$_____ $900+$_____$=1000$

$800+$_____$=1000$ _____$+0=1000$

_____$+60=100$ $30+70=$_____

$50+50=$_____ $100+$_____$=1000$

$700+$_____$=1000$ _____$+80=100$

_____$+4=10$ $5+5=$_____

$300+700=$_____ $80+$_____$=100$

$8+$_____$=10$ _____$+30=100$

_____$+8=10$ _____$+400=1000$

_____$+30=100$ $90+10=$_____

_____$+500=1000$ $400+$_____$=1000$

Altogether, Adam and Josh have 1000 pennies in their collections. Josh has 200 more than Adam. How many pennies does Josh have? How about Adam?

Harriet needs to practice piano for 100 minutes this week. She practiced for 30 minutes on Monday and 30 minutes on Tuesday. How many more minutes does she need to practice for this week?

Use an Empty
Number Line

You can use an empty number line to help you make 100 or 1000. Let's try it for
600+____=1000.

600
↑
700   800   900   1000
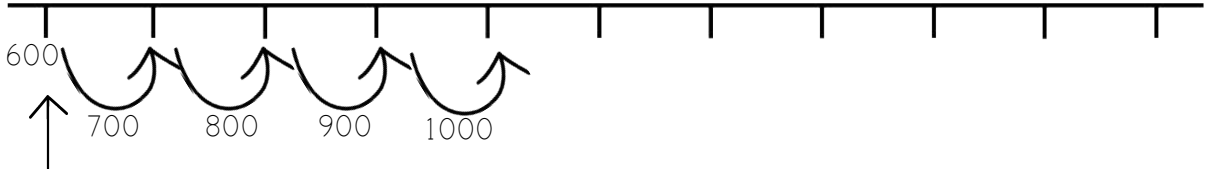
Write, "600." Then jump until you get to 1000. That's 4 jumps.   600+400=1000

Use the number lines to make 100 or 1000.

800+____=1000

800

40+____=100

40

700+____=1000

700

20+____=100

20

200+____=1000

200
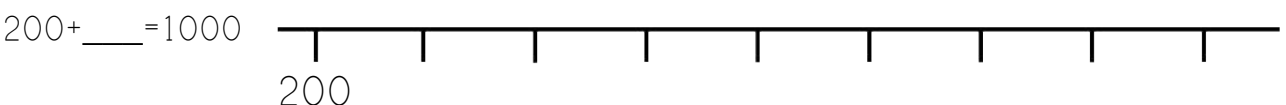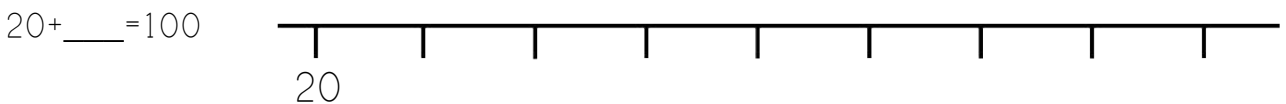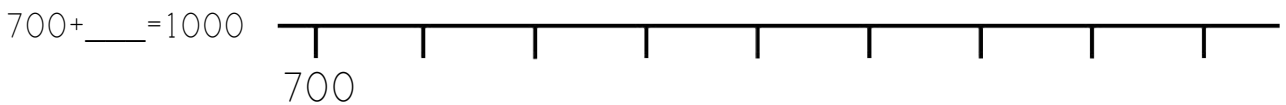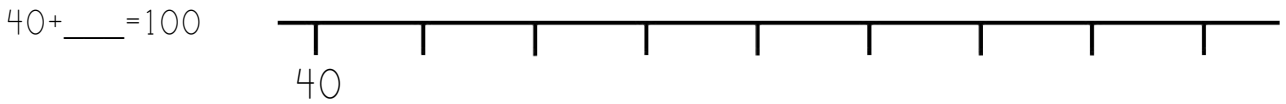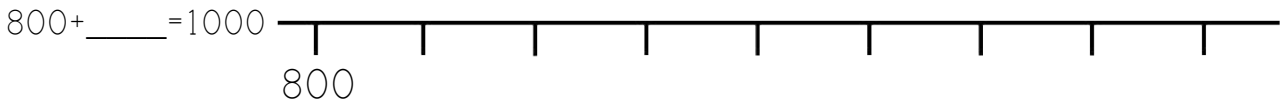
Problem-Solving with 100 and 1000

There are 1000 lockers in the school. 200 of them are blue. 500 are red. The rest are brown. How many of the lockers are brown?

Show your work.

Grandma turned 100 years old today! For the first 20 years of her life, she lived in Australia. Then she lived in the USA for 10 years. For the rest of her life she lived in England. For how many years did she live in England?

Show your work.

It takes 1000 pennies to make $10.00. Dexter has 100 pennies. His sister has 300 pennies. How many more pennies do they need to make $10.00?

Show your work.

Putting It All Together

Solve the equations using any of the strategies that you have learned so far. If the sum is EVEN, shade the box green. If the sum is ODD, shade the box blue.

900+900= _____	2349+2= _____	1118+3= _____	2000+2000= _____
300+100= _____	600+800= _____	400+200= _____	1000+8000= _____
4000+4000= _____	3000+6000= _____	1489+0= _____	12+13= _____
2000+6000= _____	2000+4000= _____	800+800= _____	600+400= _____
	800+300= _____	70+30= _____	5090+3= _____
Let's put it all together!	12+12= _____	500+500= _____	3000+4000= _____

Bonus Activity - Teacher Instructions

Include this activity at the end of Level 8 in your Addition Station.

This activity integrates the strategies that students have already learned: +0, +1, +2, and +3, Doubles, Doubles +1, Doubles +2, and Making 10/100/1000.

Overview:
In this Bonus Activity, students choose a task card, add the numbers, and record the equations in their notebook or on the recording sheet.

Preparation:
- Print and laminate task cards.
- Make copies of recording sheets (you may wish to have students record the answers in their notebooks instead).
- To set these up, I typically cut out the title and directions and paste them on either side of a piece of cereal box cardboard. I store the center pieces in small re-sealable bags, and then keep everything in a large re-sealable bag. I've made a video showing how I make and store the center pieces that you can watch by clicking here:

https://www.youtube.com/watch?v=Z4EKxxCYnjo&feature=youtu.be

Winter Fun Addition

Math Center
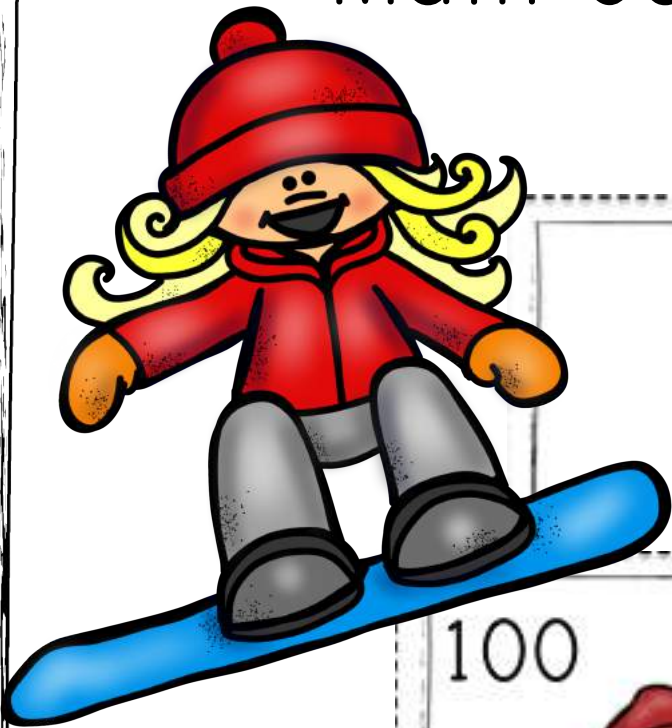
60+40

100

Directions

Choose a snowboarding card. Read the equation and find the matching sum on a tubing card. Place the two cards together and record the equations on the recording sheet.

60+40

100
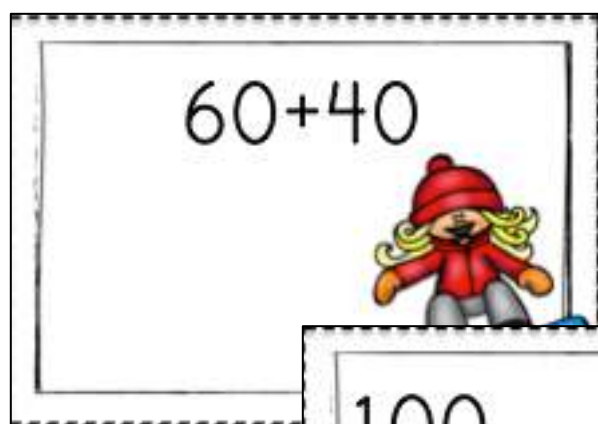
1199+0	9789+1
80+10	900+100
5000+1000	3408+2
90+20	400+200

3000+2000

1919+3
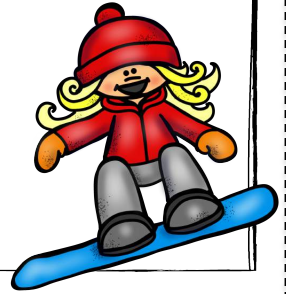
500+300

2000+3000

12+12

70+70

900+900

4000+4000

500+600

3000+4000

2000+4000

700+900

60+40

30+70

900+100

500+500

1199

9790

90

1000

6000

3410

110

600

5000

1922

800

5000

24

140

1800

8000

1100

7000

6000

1600

100

100

1000

1000

Recording Sheet

Record the addends and sum for each equation.

Addend	Addend	Sum

Addend	Addend	Sum

Strategy #9: Adding 10's and 100's

In this level, students will learn how to add 10 and 100 (and multiples of 10 and 100) to a number, with sums to 9999. Students will use place value understanding when learning this concept.

For example, in the equation 1245+20, students will learn that they simply add 2 more groups of 10 to the tens place. For an equation like 4330+300, they will add 3 more groups of 100 to the hundreds place.

Adding 10's and 100's

Thousands	Hundreds	Tens	Ones
3	4	7	3

3473+20=____

Thousands	Hundreds	Tens	Ones
3	4	9	3

This shows 3 thousands, 4 hundreds, 7 tens and 3 ones.

When we add 20...

...we just add two more groups of 10 to the tens place. So in this example, we now have 3 thousands, 4 hundreds, 9 groups of 10, and 3 ones.

Use the number charts to add the 10's or 100's to each number.

Th	H	T	O
2	7	4	2

+30=

Th	H	T	O

2742+30=_____

Th	H	T	O
3	7	1	3

+200=

Th	H	T	O

3713+200=_____

Th	H	T	O
1	9	0	8

+80=

Th	H	T	O

1908+80=_____

Th	H	T	O
2	1	3	9

+500=

Th	H	T	O

2139+500=_____

Th	H	T	O
5	5	0	8

+60=

Th	H	T	O

5508+60=_____

Th	H	T	O
8	4	1	1

+100=

Th	H	T	O

8411+100=_____

Th	H	T	O
2	4	2	1

+60=

Th	H	T	O

2421+60=_____

Th	H	T	O
	6	0	9

+3000=

Th	H	T	O

609+3000=_____

Let's Add 10's and 100's

Solve the equations. Remember that order of addends doesn't matter.

4902+10=_____   849+40=_____   100+2807=_____

10+356=_____   1110+400=_____   4982+10=_____

1916+30=_____   100+238=_____   3829+100=_____

59+20=_____   300+2590=_____   1824+50=_____

8415+100=_____   302+30=_____   9000+80=_____

100+1440=_____   200+345=_____   500+6161=_____

490+300=_____   45+300=_____   80+8006=_____

20+3158=_____   560+30=_____   756+20=_____

Complete the +10 and +100 Wheels:
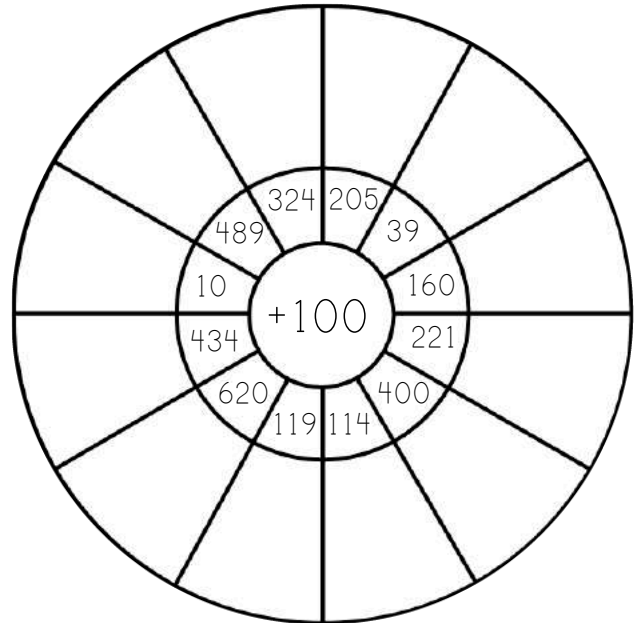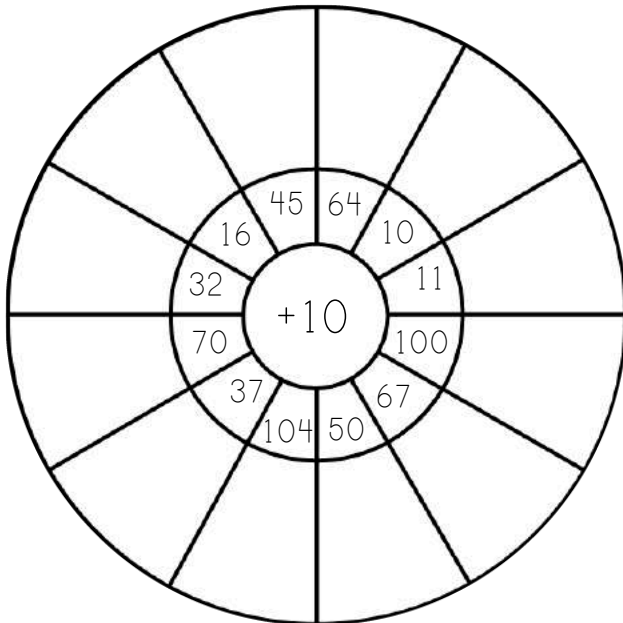
Write and solve three +300 equations:

_____ +300=_____   _____ +300=_____   _____ +300=_____

Adding 10's and 100's
WITH REGROUPING

Thousands	Hundreds	Tens	Ones
1	5	8	1

This shows 1 thousand, 5 hundreds, 8 tens and 1 one.

+30

When we add 30, we end up with 11 groups of 10 in the tens column.

Thousands	Hundreds	Tens	Ones
1	6	1	1

10 groups of 10 makes 100, so we take 10 tens and add 1 to the hundreds place. We still have 1 group of 10 leftover for the tens place.
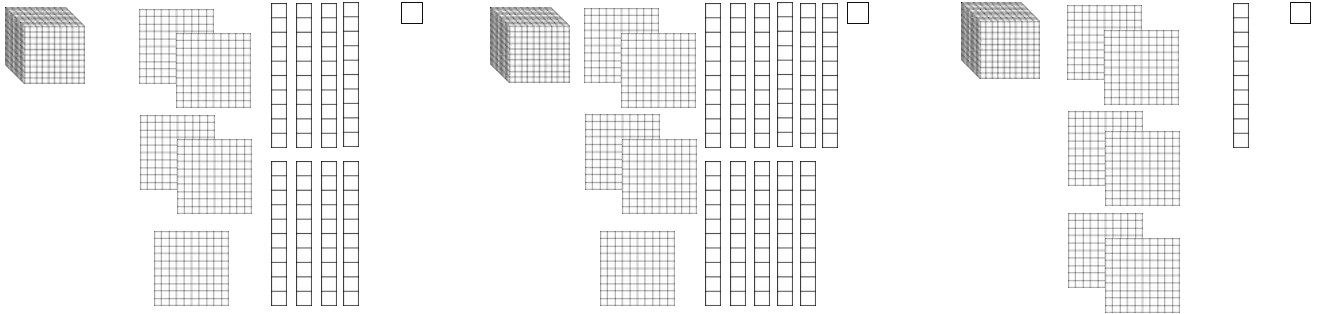
Use the number charts to add the 10's or 100's to each number. Remember to regroup!

Th	H	T	O
1	4	5	6

+60=

Th	H	T	O

1456+60=_____

Th	H	T	O
3	0	4	2

+90=

Th	H	T	O

3042+90=_____

Th	H	T	O
8	6	1	2

+50=

Th	H	T	O

8612+50=_____

Th	H	T	O
8	2	0	9

+800=

Th	H	T	O

8209+800=_____

Th	H	T	O
4	9	2	0

+200=

Th	H	T	O

4920+200=_____

Th	H	T	O
1	2	8	2

+40=

Th	H	T	O

1282+40=_____

PRACTICING WITH 10'S AND 100'S

Let's practice adding groups of 10 and 100. Remember to regroup where you need to.

1893+200=_____   2782+200=_____   5624+100=_____

4820+60=_____   1187+700=_____   3498+20=_____

657+400=_____   4598+20=_____   2000+400=_____

Fill in the unknowns:

8749+40=_____

800+_____=3932

_____+60=4590

2423+60=_____

700+_____=1981

_____+3459=3559

6902+80=_____

70+_____=1270

_____+40=3469

_____+300=3837

5482+40=_____

1002+700=_____

4503+_____=5003

_____+60=1710

3892+400=_____

Maggie was born in 1980. What year will it be when she is 50 years old?

So far the family has travelled for 2000 kilometers. They still have 2346 kilometers to go. In all, how many kilometers will they be travelling?

Graph It!

Cut out each equation. Paste it onto the graph.

Sums between 0 and 1999	Sums between 2000 and 3999	Sums between 4000 and 5999	Sums between 6000 and 7999	Sums between 8000 and 9999

Sum

2490+300	60+60	4000+5000	459+100	6700+400
600+100	600+400	7890+0	3000+5000	2000+2000
3493+30	400+400	4020+800	3391+300	1200+1200

Strategy #10: Plus Seven, Eight, and Nine

Now that students have learned how to add ten and multiples of ten to a number, they will practice the Plus Eight and Nine strategy from previous grade levels.

In this Addition Station this concept is also extended to include plus 7's.

Students will be working with 2, 3, and 4 digit numbers ending in 7, 8, or 9. They will be adding a 1-digit number.

To practice this concept, students learn to manipulate numbers in order to form a more manageable equation. For example, in the equation 218+6, students could take 2 away from the 6 and give it to the 218 to make an even 220. Now students can solve the equation 220+4, which is much easier.

Once students learn the art of number manipulation to make an equation easier, you may notice that some of your students begin to manipulate the numbers in other ways as well, in order to make an equation easier to solve. This is wonderful! Flexible thinking is a big goal of mental math.

USING TENS
To Add 7, 8, and 9

Friendly numbers are numbers that are easy to work with. Numbers like 10, 20, 50, 100, and 200 are friendly numbers.

58+6

Step 1: Let's take 2 away from the 6 and give it to the 58 to make a "friendly number."

Step 2: Now we have an easier equation to solve! 60+4=_____

147+9=____

Step 1: Take 3 away from the 9 and give it to the 147 to make a friendly number.

Step 2: Now we have an easier equation to solve: _____ + _____ = _____

228+5=____

Step 1: Take 2 away from the 5 and give it to the 228 to make a friendly number.

Step 2: Now we have an easier equation to solve: _____ + _____ = _____

3149+6=_____

Step 1: Take 1 away from the 6 and give it to the 3149 to make a friendly number.

Step 2: Now we have an easier equation to solve: _____ + _____ = _____

On a scale of 1-3, how well do you understand this strategy? (1 means you don't understand it, 2 means you "kind of" understand it but still need more practice, 3 means you understand it really well.)

_____

LET'S KEEP PRACTICING!

2378+11=____

Step 1: Take 2 away from the 11 and give it to the 2378 to make a friendly number.

Step 2: Now we have an easier equation to solve: _____+_____=_____

1818+12=____

Step 1: Take 2 away from the 12 and give it to the 1818 to make a friendly number.

Step 2: Now we have an easier equation to solve: _____+_____=_____

777+9=____

Step 1: Take 3 away from the 9 and give it to the 777 to make a friendly number.

Step 2: Now we have an easier equation to solve: _____+_____=_____

129+7=____

Step 1: Take 1 away from the 7 and give it to the 129 to make a friendly number.

Step 2: Now we have an easier equation to solve: _____+_____=_____

3207+11=____

Step 1: Take 3 away from the 11 and give it to the 3207 to make a friendly number.

Step 2: Now we have an easier equation to solve: _____+_____=_____

Let's Add 7, 8, and 9!

Solve the +7, +8, and +9 equations using the strategy that you learned. Use some real base 10 blocks if that makes it easier for you. Remember that order doesn't matter! So an equation like 5+8 is the same as 8+5; either one can be solved using the plus 8 strategy!

*Do you need to move any numbers around for this one?

349+5=

648+7=

289+11=

27+6=

219+10=

988+7=

857+8=

267+12=

398+5=

457+5=

118+9=

239+11=

528+9=

117+6=

767+4=

228+5=

909+6=

127+7=

367+4=

189+9=

578+6=

147+9=

138+6=

87+12=

9+6=

29+11=

578+4=

578+8=

149+4=

557+7=

899+6=

218+9=

417+6=

268+4=

208+5=

698+4=

557+5=

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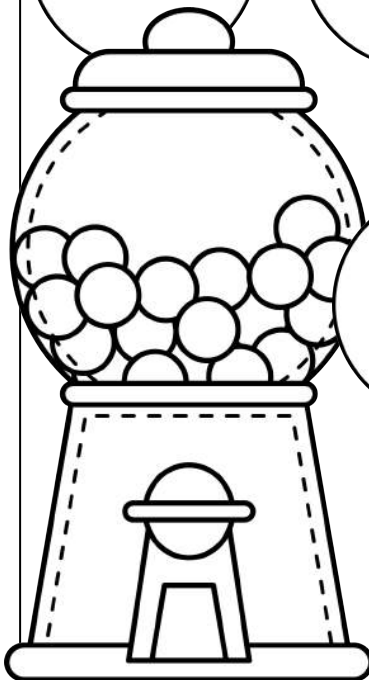
Add It Up!

Fill in the missing numbers on the t-charts. Use the strategy that you learned for +7, +,8 and +9.

+7	
249	256
1178	
456	
22	
189	
277	
300	
11	
798	
6009	
2890	
367	
1788	

+8	
247	255
60	
2779	
59	
1190	
268	
1257	
6789	
256	
1188	
3909	
58	
20	

+9	
288	297
18	
199	
2679	
2278	
17	
2777	
3009	
458	
2167	
38	
9	
1907	

This month, Matthew worked for 119 hours. On the weekend he worked for 12 more hours. Altogether, how many hours did he work for?

Show your work.

Write an answer sentence.

_____

_____

_____

_____

OUTER SPACE ADDITION

Use any of the strategies that you have learned so far to solve these equations:

6981+0=

200+800=

765+200=

1154+30=

900+100=

600+400=

12+14=

1277+9=

800+800=

700+200=

4000+4000=

529+11=

30+10=

2578+20=

178+8=

600+100=

3000+3000=

1472+400=

500+500=

499+4=

5000+3000=

457+200=

200+800=

10+1111=

67+7=

900+300=

900+900=

500+6339=

878+11=

3000+6000=

5609+90=

258+30=

Strategy #11: Adding 1000's

By this time, students have had practice adding 10 and 100 (and multiples) to numbers with sums to 9999. In this level, students will learn how to add 1000 and multiples of 1000 with sums to 9999. Once again, students will use place value understanding when learning this concept.

Adding 1000's

Thousands	Hundreds	Tens	Ones
5	3	0	9

5309+1000=_____

Thousands	Hundreds	Tens	Ones
6	3	0	9

This shows 5 thousands, 3 hundreds, 0 tens and 9 ones.

When we add 1000...

...we just add one more group of 1000 to the thousands place. So in this example, we now have 6 thousands, 3 hundreds, 0 groups of 10, and 9 ones.

Use the number charts to add 1000 or a multiple of 1000 to each number.

Th	H	T	O
2	7	4	2

+2000=

Th	H	T	O

2742+2000=_____

Th	H	T	O
3	5	0	3

+2000=

Th	H	T	O

3503+2000=_____

Th	H	T	O
7	1	1	4

+1000=

Th	H	T	O

7114+1000=_____

Th	H	T	O
3	0	9	0

+4000=

Th	H	T	O

3090+4000=_____

Th	H	T	O
	6	1	4

+7000=

Th	H	T	O

614+7000=_____

Th	H	T	O
1	5	9	8

+4000=

Th	H	T	O

1598+4000=_____

Th	H	T	O
6	0	0	9

+1000=

Th	H	T	O

6009+1000=_____

Th	H	T	O
2	6	0	0

+5000=

Th	H	T	O

2600+5000=_____

Let's Add Thousands!

Solve the Plus 1000 equations. Remember that the order of the addends doesn't matter.

4561+2000=_____   2598+2000=_____   2590+2000=_____

1000+2300=_____   1000+1888=_____   1000+2576=_____

1578+3000=_____   2745+3000=_____   3000+3000=_____

2587+4000=_____   4812+4000=_____   1257+4000=_____

1919+1000=_____   7600+1000=_____   7529+1000=_____

6000+2376=_____   6000+2699=_____   6000+125=_____

2000+300=_____   2000+100=_____   2000+2444=_____

5000+1982=_____   5000+360=_____   5000+4010=_____

Add 1000 to each number on the wheel.

67 871
676   29
290 +1000 272
78   300
435   456
101 30
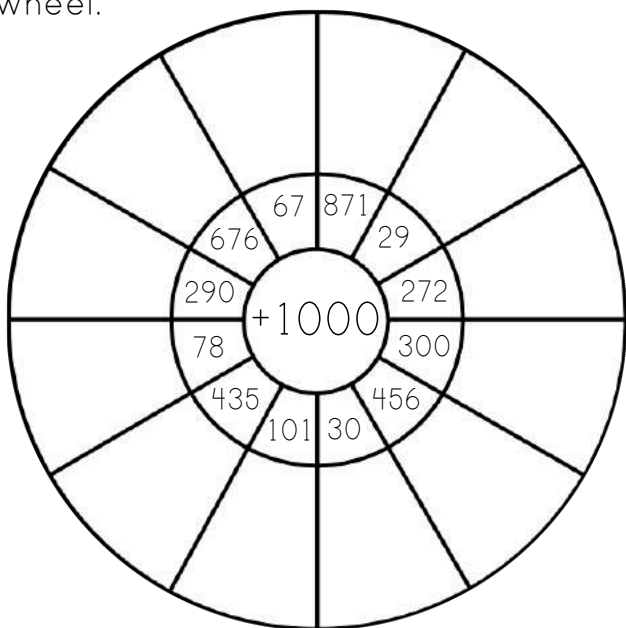
1000 kids are expected to attend the magic show. There will also be 890 adults. How many people will attend the magic show in all?

MISSING ADDENDS

Use any of the strategies that you have learned so far to solve the equations below.

1281	3009	9000	8000
1278		3009	5000	1000

9689	1700	1800	357
9189	800	900	348

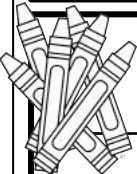| 100	1723	3487	4356
70	800	3387	2000

8789	7500	1410	338
100	1400	1500	999
4290	680	7789	100
4209	700	500	209
1000	2405	690	5000

Find the sums for the equations below. Then shade in the sum on the number chart.

600+800=_____   327+11=_____

70+30=_____   4500+3000=_____

2399+6=_____   300+200=_____

3000+1290=_____   6789+1000=_____

800+200=_____   650+40=_____

Write equations for one of the sums that is not shaded yet: _____+_____=_____

Strategy #12: Using Friendly Numbers

In this level, students will learn a "bridging" technique that will be useful to them for the rest of their lives. It involves using a multiple of 10 or 100 in order to make an equation easier to solve.

For example, when a student is presented with an equation such as 216+9, he can process the equation in this way:
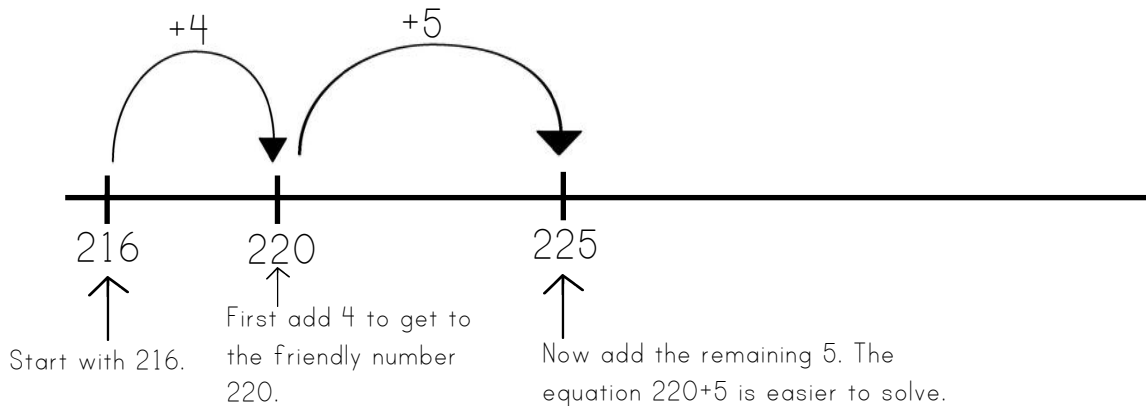
+4   +5

216   220   225

Start with 216.

First add 4 to get to the friendly number 220.

Now add the remaining 5. The equation 220+5 is easier to solve.

This strategy will reinforce flexible thinking, and further encourage students to manipulate equations in order to make them easier to solve.

In the Grade 4 Addition Station, students will practice this strategy with 3/4 digit + 1/2 digit equations.

Let's Make
FRIENDLY NUMBERS

A friendly number is a number that is easy to work with. Numbers that end in 0, such as 10, 20, 30, 100, 120, 190, and 200 and are friendly numbers. Let's try making some friendly numbers:

208 I can make this into the friendly number 210 by adding __2__.	**455** I can make this into the friendly number 460 by adding ____.	**35** I can make this into the friendly number 40 by adding ____.
1579 I can make this into the friendly number 1580 by adding ____.	**506** I can make this into the friendly number 510 by adding ____.	**2245** I can make this into the friendly number 2250 by adding ____.
513 I can make this into the friendly number 520 by adding ____.	**1177** I can make this into the friendly number 1180 by adding ____.	**998** I can make this into the friendly number 1000 by adding ____.
7645 I can make this into the friendly number 7650 by adding ____.	**1299** I can make this into the friendly number 1300 by adding ____.	**64** I can make this into the friendly number 70 by adding ____.
146 I can make this into the friendly number 150 by adding ____.	**104** I can make this into the friendly number 110 by adding ____.	**347** I can make this into the friendly number 350 by adding ____.

Using Friendly Numbers
to Add Multi-Digit Numbers

We can use friendly numbers to make it easier to add two numbers. Take a look!

216+9

+4   +5

216   220   225

Start with 216.

First add 4 to get to the friendly number 220.

Now add the remaining 5. The equation 220+5 is easier to solve.

Now you try!

115+7

+___   +2

115

Start with 115.

First add ____ to get to the friendly number 120.

Now add the remaining 2. The equation 120+2 is much easier to solve!
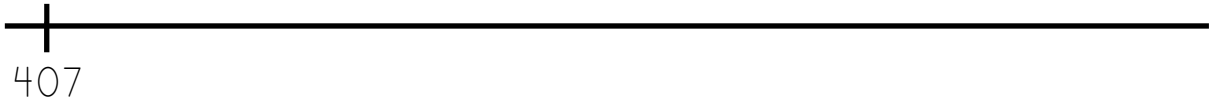

2217+9

+___   +6

2217

Start with 2217.

First add ____ to get to the friendly number 2220.

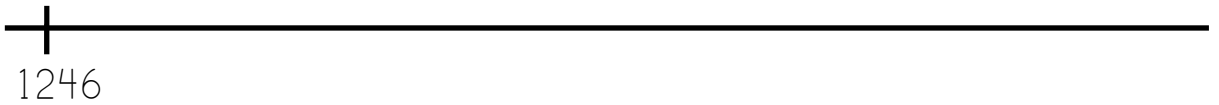Now add the remaining 6. The equation 2220+6 is much easier to solve!

Practicing With
FRIENDLY NUMBERS

Use the empty number lines to solve each equation. Remember to jump to a friendly number first, and then complete the equation.
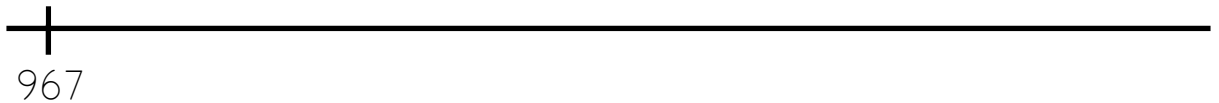
407+7
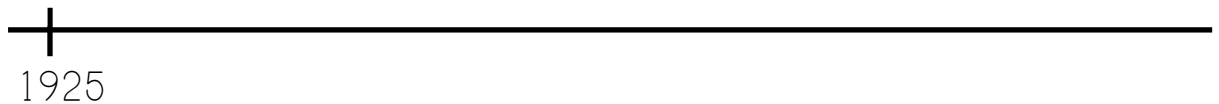
———|—————————————————————
407

1246+6

———|—————————————————————
1246

967+5

———|—————————————————————
967

1925+9

———|—————————————————————
1925

618+8

———|—————————————————————
618
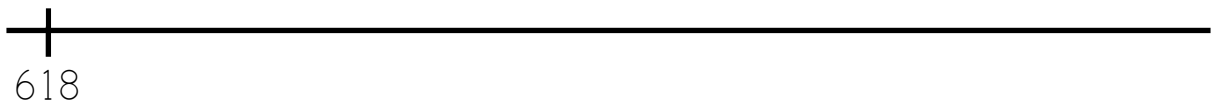
Let's Make
FRIENDLY NUMBERS

Solve the equations below. If you need to draw yourself a number line, make a small one in the box. If you can use the "friendly number" strategy in your head without the number line, go ahead!

1217+4=_____	278+6=_____	1582+9=_____
118+6=_____	456+6=_____	736+8=_____
545+9=_____	207+7=_____	1259+6=_____
5896+5=_____	4008+7=_____	577+7=_____

Putting It All Together

Use any of the strategies that you have learned so far.

+1000	
2315	3315
8760	
8000	
1179	
2541	
6090	

+100	
3249	3349
146	
2572	
144	
7769	
9876	

+9	
48	57
118	
369	
78	
377	
219	

Write 5 equations that equal 1000:

_____ + _____ = 1000

_____ + _____ = 1000

_____ + _____ = 1000

_____ + _____ = 1000

_____ + _____ = 1000

Fill in the missing numbers.

1682
1678 | ☐

☐
159 | 11

8000
4000 | ☐

180
90 | ☐

1557
1257 | ☐

☐
1267 | 9

☐
300 | 700

8765
1000 | ☐
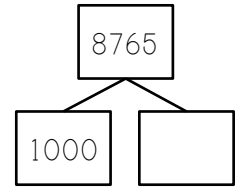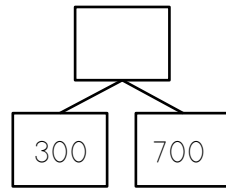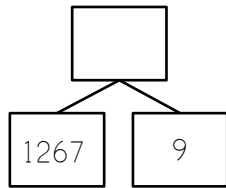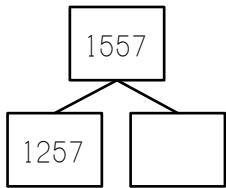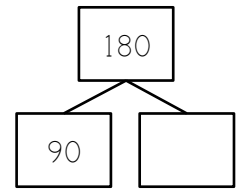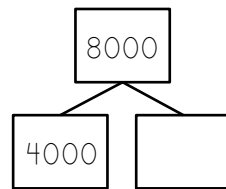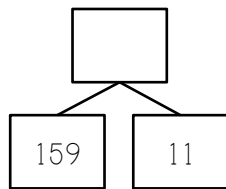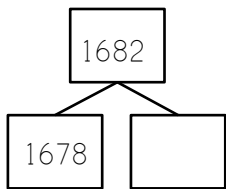
Write the sum.

4000+4000=_____

600+400=_____

2625+300=_____

500+500=_____

6798+5=_____

7000+1000=_____

60+40=_____

5698+3000=_____

1257+8=_____

0+8509=_____

4908+80=_____

4448+50=_____

1000+3000=_____

500+100=_____

1780+200=_____

700+700=_____

800+200=_____

6000+3000=_____

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Bonus Activity - Teacher Instructions

Include this activity at the end of Level 12 in your Addition Station.

This activity integrates the strategies that students have already learned: +0, +1, +2, and +3, Doubles, Doubles +1, Doubles +2, Making 10/100/1000, Adding 10's and 100's, Plus 7, 8, and 9, Plus 1000, and Using Friendly Numbers.

Overview:
In this Bonus Activity, students choose a task card, add the numbers, and record the equations in their notebook or on the recording sheet.

Preparation:
- Print and laminate task cards.
- Make copies of recording sheets (you may wish to have students record the answers in their notebooks instead).
- To set these up, I typically cut out the title and directions and paste them on either side of a piece of cereal box cardboard. I store the center pieces in small re-sealable bags, and then keep everything in a large re-sealable bag. I've made a video showing how I make and store the center pieces that you can watch by clicking here:

  https://www.youtube.com/watch?v=Z4EKxxCYnjo&feature=youtu.be

Ball Team Addition

Math Center

700+100

800

Ball Team Addition Math Center
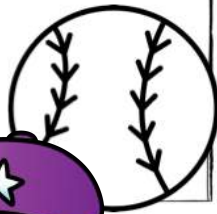
Directions

Choose a "team" card. Read the equation and find the matching sum on a baseball card. Place the two cards together and record the equations on the recording sheet.

700+100

800
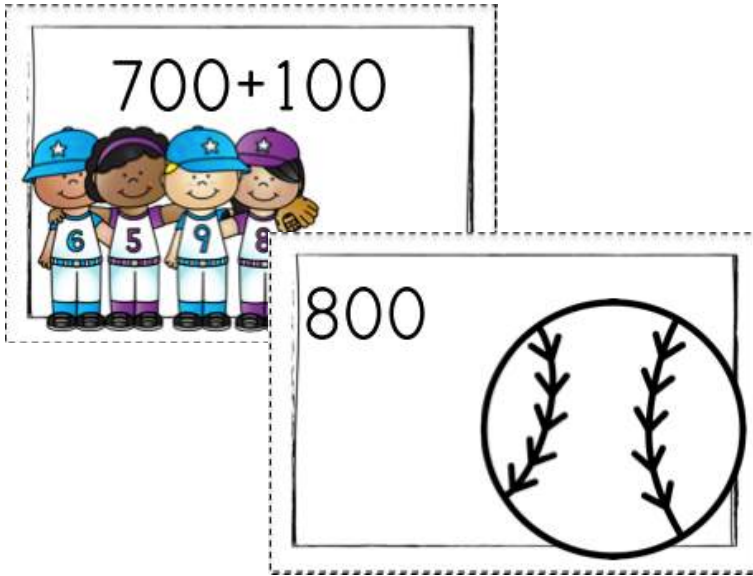
700+100

3000+1000

2899+2

6000+2000

6707+3

4000+3000

11+11

600+600

600+700

2000+3000

12+14

500+700

900+100

1665+30

2742+200

1905+200

258+7

47+6

169+6

2244+4000

6090+2000

136+9

256+5

1247+9

800
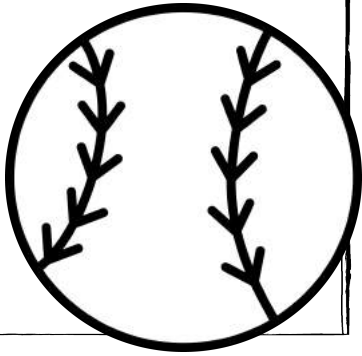
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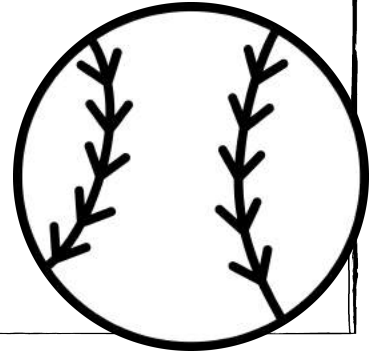
2901
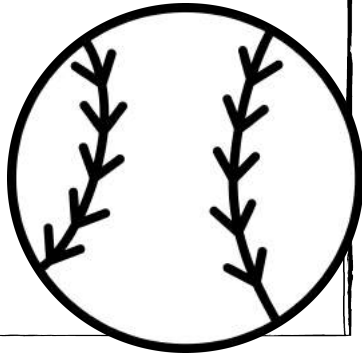
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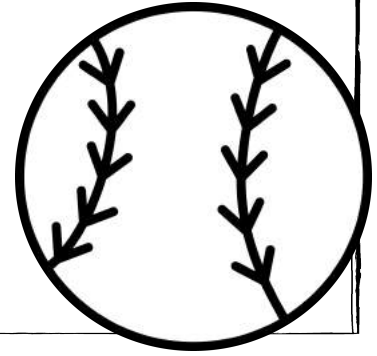
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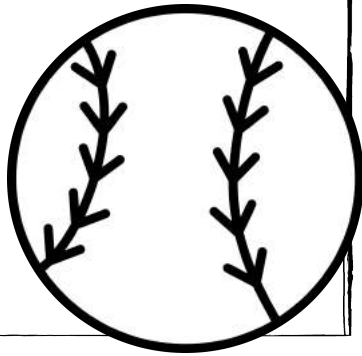
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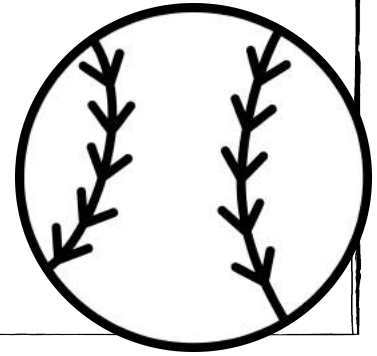
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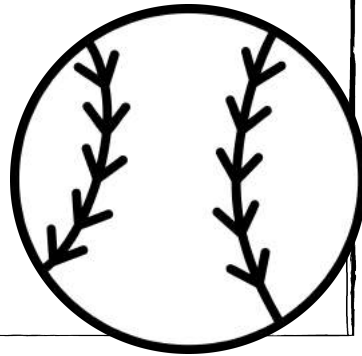
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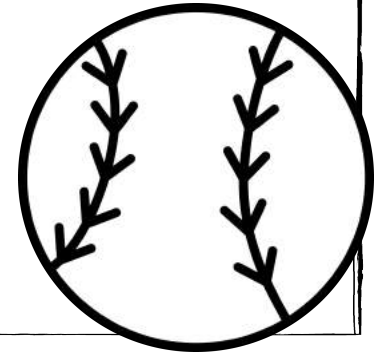
1300
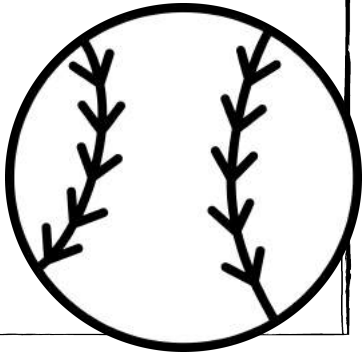
5000
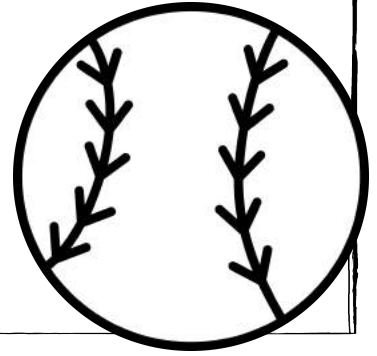
26
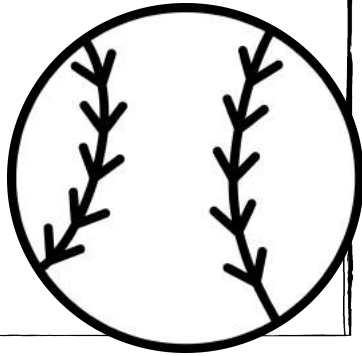
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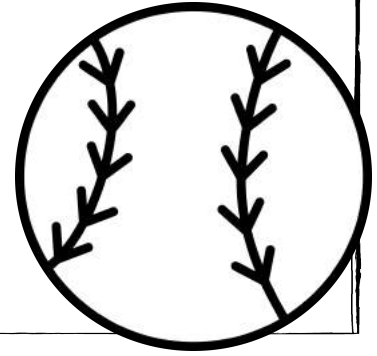
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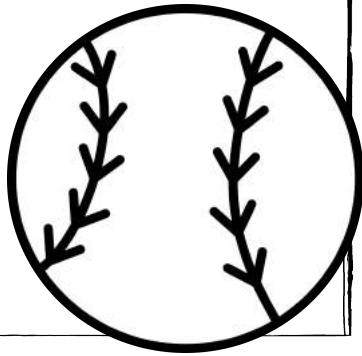
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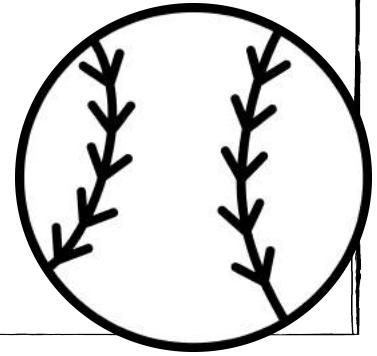
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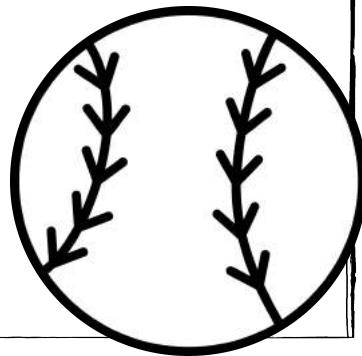
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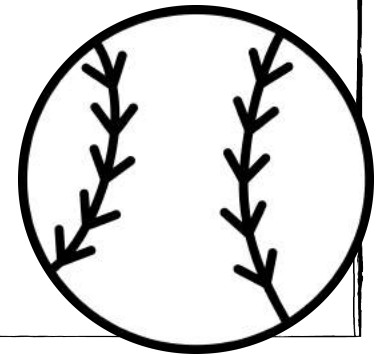
265
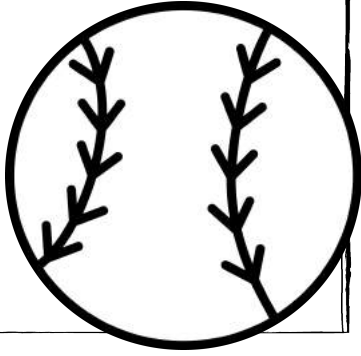
53
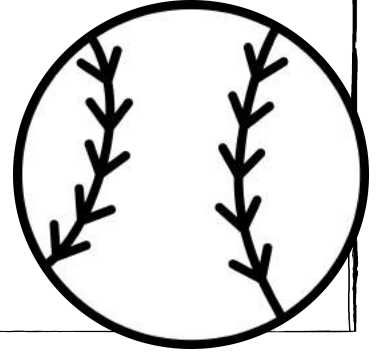
175

6244

8090

145

261

1256

Recording Sheet

Record the addends and sum for each equation.

Addend	Addend	Sum

Addend	Addend	Sum
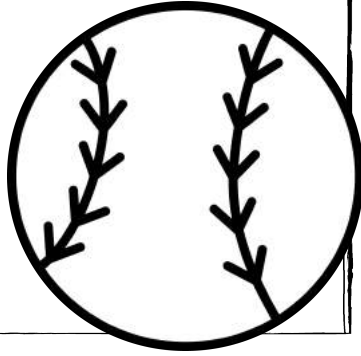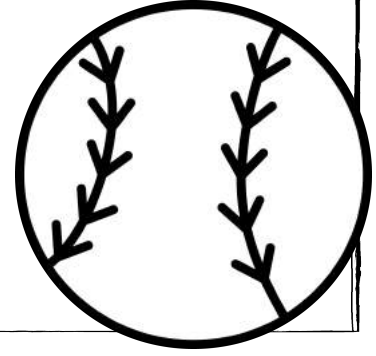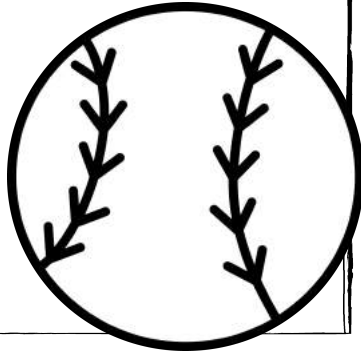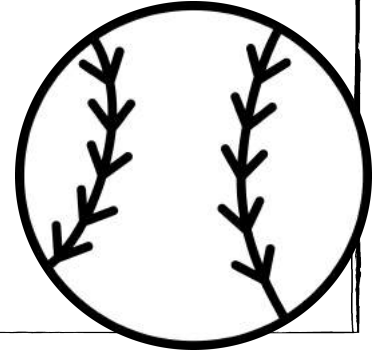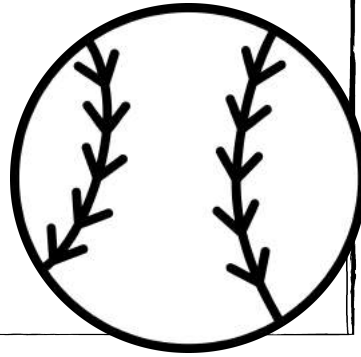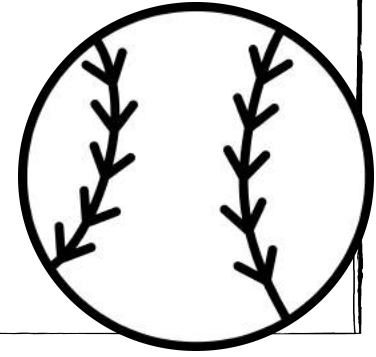
Strategy #13: Left-to-Right Addition

In this level, students will learn how to perform left-to-right addition using a mental math approach. In a 3-digit plus 3-digit equation, this means that they will add the hundreds first, then the tens, and then lastly the ones. Place value understanding is crucial for this type of addition, but by this time students should have a good understanding of the thousands, hundreds, tens and ones places.

Ideally, by Grade 4 your students have already been exposed to left-to-right addition; however, it is still important to provide review with smaller numbers before learning with larger numbers.

In this level, students will begin with a brief review of 2-digit + 2-digit and 3-digit + 3-digit equations without regrouping. Then they will move along to addition with regrouping. Lastly, students will practice 4-digit + 4-digit addition with and without regrouping.

Decomposing Numbers

Decompose each number into thousands, hundreds, tens, and ones.

3672	Th	H	T	O

9082	Th	H	T	O

1572	Th	H	T	O

3115	Th	H	T	O

9075	Th	H	T	O

3577	Th	H	T	O

8868	Th	H	T	O

745	Th	H	T	O

9001	Th	H	T	O

2841=_____+_____+___+__

9068=_____+_____+___+__

2524=_____+_____+___+__

1172=_____+_____+___+__

7401=_____+_____+___+__

2213=_____+_____+___+__

8465=_____+_____+___+__

1111=_____+_____+___+__

Write any 4-digit number and then decompose it:

Compose:

2000+400+10+9=_____

8000+100+60+4=_____

6000+400+20+5=_____

4000+100+4=_____

7000+200+60=_____

3000+400+20+5=_____

9000+100+40+4=_____

800+80+6=_____

5000+10+4=_____

LEFT-TO-RIGHT

When we add two 2-digit numbers, we can make it easier by adding the tens first, and then the ones. Take a look!

62+25

First add the tens: _60_ + _20_ = _80_

Then add the ones: _2_ + _5_ = _7_

Then add the tens and ones together: _80_ + _7_ = _87_

35+24

First add the tens: _____ + _____ = _____

Then add the ones: _____ + _____ = _____

Then add the tens and ones together: _____ + _____ = _____

75+23

First add the tens: _____ + _____ = _____

Then add the ones: _____ + _____ = _____

Then add the tens and ones together: _____ + _____ = _____

Jack has $64.00 and Glen has $33.00. How many dollars do they have altogether?

Show your work:

To add 3-digit numbers, we use the same process, except we add the hundreds first. Take a look!

253+416

First add the hundreds: _200_ + _400_ = _600_

Then add the tens: _50_ + _10_ = _60_

Then add the ones: _3_ + _6_ = _9_

Then add the hundreds, tens and ones together: _600_ + _60_ + _9_ = _669_

127+542

First add the hundreds: _____ + _____ = _____

Then add the tens: _____ + _____ = _____

Then add the ones: _____ + _____ = _____

Lastly, add the hundreds, tens and ones together: _____ + _____ _____ = _____

865+134

First add the hundreds: _____ + _____ = _____

Then add the tens: _____ + _____ = _____

Then add the ones: _____ + _____ = _____

Lastly, add the hundreds, tens and ones together: _____ + _____ + _____ = _____

13-C

LEFT-TO-RIGHT ADDITION

WITH and WITHOUT REGROUPING

Regrouping makes this a bit trickier, but you still follow the same process.

EXAMPLE

613+641

First add the hundreds: __600__ + __600__ = 1200

Then add the tens: __10__ + __40__ = __50__

Then add the ones: __3__ + __1__ = __4__

Lastly, add the hundreds, tens and ones together:
1200 + __50__ + __4__ = __1254__

45+37

First add the tens: _____ + _____ = _____

Then add the ones: _____ + _____ = _____

Lastly, add the tens and ones together:

_____ + _____ = _____

437+14

First add the hundreds: _____ + _____ = _____

Then add the tens: _____ + _____ = _____

Then add the ones: _____ + _____ = _____

Lastly, add the hundreds, tens and ones together:

_____ + _____ + _____ = _____

54+26

First add the tens: _____ + _____ = _____

Then add the ones: _____ + _____ = _____

Lastly, add the tens and ones together:

_____ + _____ = _____

78+41

First add the tens: _____ + _____ = _____

Then add the ones: _____ + _____ = _____

Lastly, add the tens and ones together:

_____ + _____ = _____

355+125

First add the hundreds: _____ + _____ = _____

Then add the tens: _____ + _____ = _____

Then add the ones: _____ + _____ = _____

Lastly, add the hundreds, tens and ones together:
_____ + _____ + _____ = _____

68+24

First add the tens: _____ + _____ = _____

Then add the ones: _____ + _____ = _____

Lastly, add the tens and ones together:

_____ + _____ = _____

Solve the problem:

It is 136 kilometers to the gas station. The store is 114 kilometers past the gas station. How many kilometers away is the store?

LEFT-TO-RIGHT ADDITION

236+315

First add the hundreds: _____+_____=_____

Then add the tens: _____+_____=_____

Then add the ones: _____+_____=_____

Lastly, add the hundreds, tens and ones together:

_____+_____+_____=_____

807+122

First add the hundreds: _____+_____=_____

Then add the tens: _____+_____=_____

Then add the ones: _____+_____=_____

Lastly, add the hundreds, tens and ones together:

_____+_____+_____=_____

575+205

First add the hundreds: _____+_____=_____

Then add the tens: _____+_____=_____

Then add the ones: _____+_____=_____

Lastly, add the hundreds, tens and ones together:

_____+_____+_____=_____

355+118

First add the hundreds: _____+_____=_____

Then add the tens: _____+_____=_____

Then add the ones: _____+_____=_____

Lastly, add the hundreds, tens and ones together:

_____+_____+_____=_____

450+150

First add the hundreds: _____+_____=_____

Then add the tens: _____+_____=_____

Then add the ones: _____+_____=_____

Lastly, add the hundreds, tens and ones together:

_____+_____+_____=_____

831+127

First add the hundreds: _____+_____=_____

Then add the tens: _____+_____=_____

Then add the ones: _____+_____=_____

Lastly, add the hundreds, tens and ones together:

_____+_____+_____=_____

648+125

First add the hundreds: _____+_____=_____

Then add the tens: _____+_____=_____

Then add the ones: _____+_____=_____

Lastly, add the hundreds, tens and ones together:

_____+_____+_____=_____

257+264

First add the hundreds: _____+_____=_____

Then add the tens: _____+_____=_____

Then add the ones: _____+_____=_____

Lastly, add the hundreds, tens and ones together:

_____+_____+_____=_____

Write any 3-digit + 3-digit equation and solve it using left-to-right addition.

LEFT-TO-RIGHT *with thousands*

Now that you know how to add 3-digit numbers using left-to-right addition, adding 4-digit numbers is easy! Just use the exact same process.

3471+1329

First add the thousands: _3000_ + _1000_ = _4000_

Then add the hundreds: _400_ + _300_ = _700_

Then add the tens: _70_ + _20_ = _90_

Then add the ones: _1_ + _9_ = _10_

Then add the thousands, hundreds, tens and ones together: _4000_ + _700_ + _90_ + _10_ = _4800_

Now it's your turn!

2825+1174

First add the thousands: _____ + _____ = _____

Then add the hundreds: _____ + _____ = _____

Then add the tens: _____ + _____ = _____

Then add the ones: _____ + _____ = _____

Then add everything together: _____ + _____ + _____ + _____ = _____

1027+2244

First add the thousands: _____ + _____ = _____

Then add the hundreds: _____ + _____ = _____

Then add the tens: _____ + _____ = _____

Then add the ones: _____ + _____ = _____

Then add everything together: _____ + _____ + _____ + _____ = _____

1234+2345

First add the thousands: _____ + _____ = _____

Then add the hundreds: _____ + _____ = _____

Then add the tens: _____ + _____ = _____

Then add the ones: _____ + _____ = _____

Then add everything together: _____ + _____ + _____ + _____ = _____

Let's Practice Left-to-Right Addition

3236+1432= _____   435+425= _____   687+121= _____

9085+606= _____   1287+1801= _____   2421+4713= _____

5033+1234= _____   5412+2327= _____   5563+4014= _____

753+135= _____   246+270= _____   987+101= _____

7518+1241= _____   4472+2216= _____   340+219= _____

In January and February, there are 1416 hours altogether. In March and April there are 1488 hours altogether. In all, how many hours are there in January, February, March and April?

Show your work.

Write an answer sentence.

_____

_____

_____

_____

_____

When I add from left to right, I have to remember to

_____

The hardest part of left-to-right addition is _____

_____

LET'S ADD IT UP!

Solve the equations. Use the strategy that works best for each one.
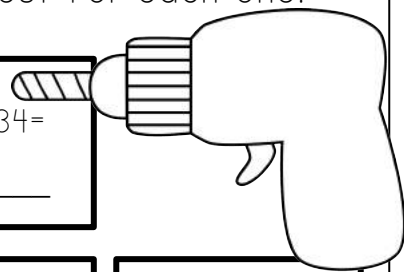
500+700=	3492+11=	2451+20=	235+234=
4000+4000=	400+600=	3000+6000=	800+800=	1791+3204=
4452+2=	2708+3262=	800+300=__	3257+0=	5000+4000=
257+7=	3512+60=	187+431=	2005+2005=	5490+400=
2000+7000=	0+1230=	100+600=	500+500=	300+200=
3254+16=	4899+3=____	469+11=	1000+3682=	38+43=

70+90=	200+800=	1358+6=
187+102=	5000+3000=	70+30=

TOOLS

Strategy #14: Break Up the Second Number

In this level, students will learn another strategy for adding multi-digit numbers. Some students find this strategy more efficient than left-to-right addition. Once they master this strategy, they will possess two "tools" for adding multi-digit numbers. This is beneficial because they can then choose the one that is the most effective and efficient for the particular equation, and for their unique abilities.

Breaking up the second number involves the following steps:
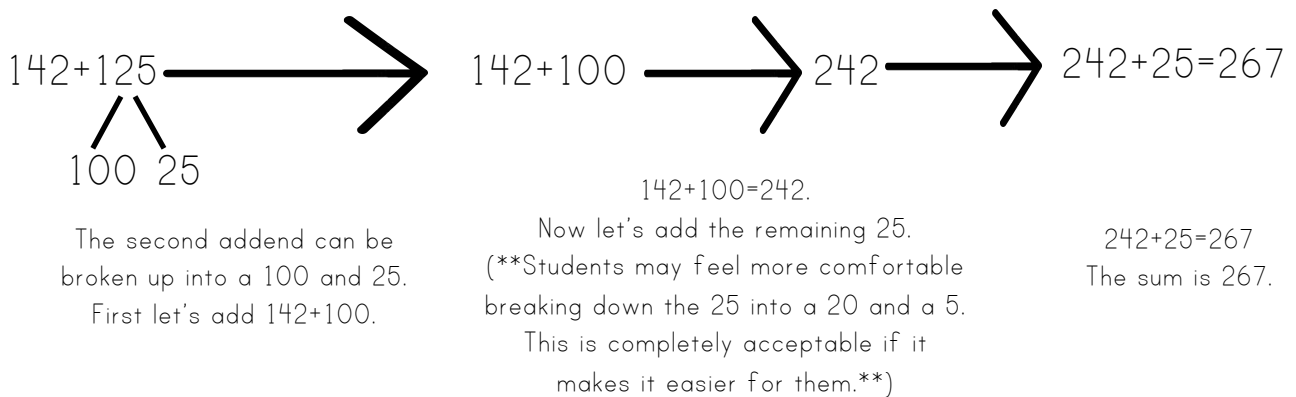
$142+125 \longrightarrow 142+100 \longrightarrow 242 \longrightarrow 242+25=267$

100 25

The second addend can be broken up into a 100 and 25. First let's add 142+100.

142+100=242. Now let's add the remaining 25. (**Students may feel more comfortable breaking down the 25 into a 20 and a 5. This is completely acceptable if it makes it easier for them.**)

242+25=267 The sum is 267.

Just as the other strategies have, this strategy will reinforce flexible thinking, and further encourage students to manipulate equations in order to make them easier to solve.

BREAK IT UP!

Another way to add two 2-digit numbers is to break the second number into 2 parts.

$$25+22$$

20   2   ← 22 can be broken up into a "20" and a "2."

<u>Step #1</u>: Break the second number into tens and ones. In this example, 22 is broken into 20 and 2.

<u>Step #2</u>: Add the 1st addend (25) to the 20. 25+20=45

<u>Step#3</u>: Now add the 2 ones. 45+2=47

Now it's your turn!

$$32+16$$

← Break the 16 up into a _____ and a _____

<u>Step #1</u>: Break the 16 into tens and ones.

<u>Step #2</u>: Add the 1st addend (32) to the 10.   32+10=_____

<u>Step#3</u>: Now add the ones. 42+6=_____

$$13+14$$

← Break the 14 up into a _____ and a _____

<u>Step #1</u>: Break the 14 into tens and ones.

<u>Step #2</u>: Add the 1st addend (13) to the 10.   13+10=_____

<u>Step#3</u>: Now add the ones. 23+4=_____

Show your work here:

$$27+31$$

LET'S KEEP PRACTICING!

45+13
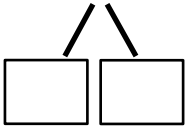
Show your work here:

24+24
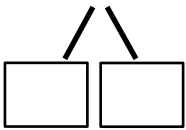
Show your work here:

63+25
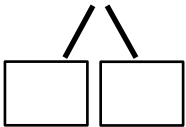
Show your work here:

50+22
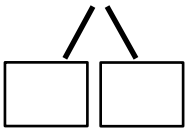
Show your work here:

15+21
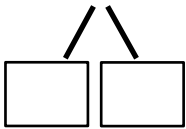
Show your work here:

87+11
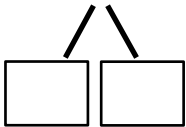
Show your work here:

BREAKING UP BIGGER NUMBERS!

You can break up bigger numbers in the exact same way. Break them up in a way that works for YOU! Here are a couple of examples:

146+223

200 23

223 can be broken up into a "200" and a "23."

OR

146+223

200   3
    20
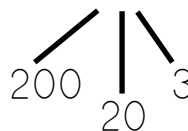
223 can be broken up into a "200," a "20," and a "3."

Solve it:

146+200=_____

346+23=_____

Solve it:

146+200=_____

346+20=_____

366+3=_____

Now it's your turn! Break the second number into 2 or 3 parts — whichever works best for you. Use the white space to show your work.

257+312

461+232

312+144

LET'S KEEP PRACTICING!

382+317

245+224

605+322

861+35

156+533

575+323

BREAK IT UP!

Use the "break up the second number" strategy to solve the equations. If the sum is odd, shade the pencil yellow. If the sum is even, shade the pencil blue.

145+230=
_____

347+243=
_____

35+25=
_____

267+251=
_____

593+108=
_____

365+224=
_____

68+23=
_____

740+158=
_____

355+254=
_____

498+212=
_____

502+246=
_____

400+369=
_____

Let's try some
BIGGER
numbers!

→
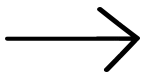
1243+442=
_____

7590+1203=
_____

3525+1434=
_____

5520+2236=
_____

3481+1311=
_____

1713+1247=
_____

3419+3400=
_____

2430+6219=
_____

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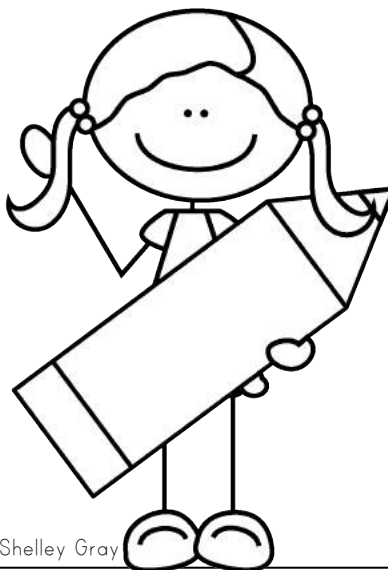
Choose the Best
STRATEGY

Let's compare left-to-right addition to the "breaking up the second number" strategy. Which one is the most effective and efficient?

Solve this equation using left-to-right addition: 145+214

Add the hundreds:

Add the tens:

Add the ones:

Add it all up:

Which strategy worked best for you?

_____

Solve this equation by breaking up the second number: 145+214

Break up the second number and add it to the 145:

Solve this equation using left-to-right addition: 1147+2462

Show your work:

Which strategy worked best for you?

_____

Solve this equation by breaking up the second number: 1147+2462

Show your work:

Solve this equation using left-to-right addition: 38+46

Solve this equation by breaking up the second number: 38+46

Which strategy worked best for you? _____

_____

Putting IT ALL Together

Use any of the strategies that you have learned so far to complete these activities.

Write a greater than (>), less than (<), or equal sign (=).

300+500 ☐ 458+12   4457+1152 ☐ 4509+1000

3121+4107 ☐ 3000+3000   235+413 ☐ 324+324

234+245 ☐ 300+200   5381+2500 ☐ 3000+3000

600+400 ☐ 700+300   4000+6000 ☐ 8000+2000

47+43 ☐ 28+58   548+9 ☐ 460+100

Fill in the missing number in each equation. Use any of the strategies that you have learned so far.

```
   6309            679             3000
  /    \          /   \           /    \
4309   ☐        568   ☐         ☐    1000


   500            4914             ☐
  /   \          /    \          /    \
250   ☐        1702   ☐       2568   1312


  2743             45              ☐
  /    \          /  \           /    \
 ☐    2243       38   ☐       2804   4164
```
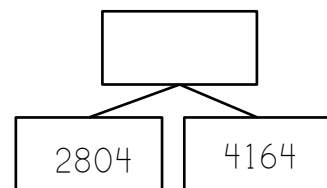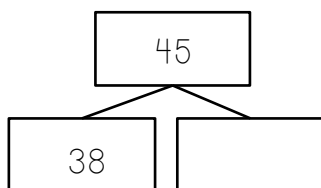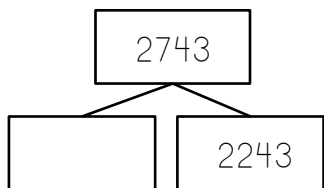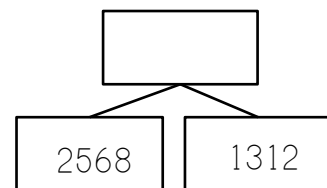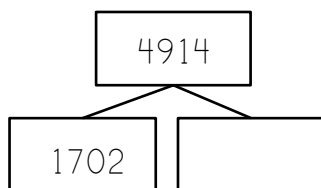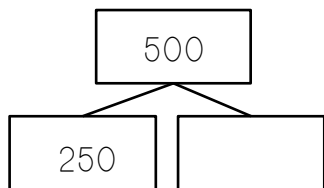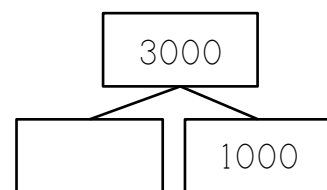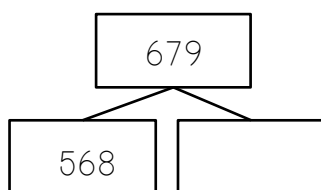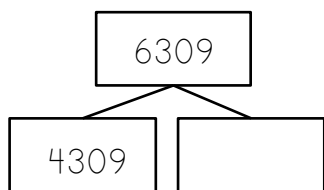
Strategy #15: Compensation

In this level, students will use their knowledge of friendly numbers in order to perform a new, but related strategy called compensation. When students use compensation, they adjust one of the addends to make it easier to solve. But then the answer must be adjusted to compensate for that original adjustment. This sounds confusing, but take a look below and it will make more sense. ☺

The compensation strategy involves the following steps:

$$34+49 \longrightarrow 34+50=84 \longrightarrow -1 \longrightarrow 83$$

We can add 1 to the second addend to make this equation easier to solve.

Since we added 1 to the equation, we now need to subtract 1 from the answer to COMPENSATE for the adjustment.

Here's another example:

$$132+64 \longrightarrow 132+60=192 \longrightarrow +4 \longrightarrow 196$$

We can subtract 4 from the second addend to make this equation easier to solve.

Since we subtracted 4 from the equation, we now need to add 4 to the answer to COMPENSATE for the adjustment.

Just as the other strategies have, this strategy will reinforce flexible thinking, and further encourage students to manipulate equations in order to make them easier to solve.

LEARNING TO COMPENSATE

Another way to add multi-digit numbers is to adjust one number to make it easier. Take a look:

34+49 → 34+50 → 84 → -1 → 83

↑ Let's add 1 to the 49 to make this equation easier to solve.

↑ 34+50 is an easier equation to solve.

↑ The sum is 84.

↑ BUT WAIT! Since we added one to the addend, we now need to take 1 away from the sum to compensate for that adjustment.

↑ The sum is 83.

Here's another example:

23+36 → 23+40 → 63 → -4 → 59

↑ Let's add 4 to the 36 to make the friendly number "40."

↑ 23+40 is an easier equation to solve.

↑ The sum is 63.

↑ BUT WAIT! Since we added 4 to the addend, we now need to take 4 away from the sum to compensate for that adjustment.

↑ The sum is 59.

Now you try it:

54+27 → 54+___ → ___ → -___ → ___

↑ I can make the 27 into a friendly number by adding ____.

↑ This is an easier equation to solve!

↑ Here is the sum.

↑ BUT WAIT! Since I added ___ to the addend, I now need to take ___ away from the sum.

↑ The sum is ____.

36+18 → 36+___ → ___ → -___ → ___

↑ I can make the 18 into a friendly number by adding ____.

↑ This is an easier equation to solve!

↑ Here is the sum.

↑ BUT WAIT! Since I added ___ to the addend, I now need to take ___ away from the sum.

↑ The sum is ____.

LET'S KEEP PRACTICING!

You can also adjust an addend by SUBTRACTING to make a friendly number. Try it here!

38+23 → 38+___ → ___ → ___ + ___ → ___

I can make the 23 into a friendly number by SUBTRACTING ____.

This is an easier equation to solve!

Here is the sum.

BUT WAIT! Since I SUBTRACTED ____ from the addend, I now need to add ____ to the sum.

The sum is ____.

83+18 → 83+___ → ___ → ___ - ___ → ___

I can make the 18 into a friendly number by adding ____.

This is an easier equation to solve!

Here is the sum.

BUT WAIT! Since I added ___ to the addend, I now need to take ___ away from the sum.

The sum is ____.

46+25 → 25+___ → ___ → ___ - ___ → ___

I can make the 46 into a friendly number by adding ____.

This is an easier equation to solve!

Here is the sum.

BUT WAIT! Since I added ___ to the addend, I now need to take ___ away from the sum.

The sum is ____.

91+22 → 91+___ → ___ → ___ + ___ → ___

I can make the 22 into a friendly number by SUBTRACTING ____.

This is an easier equation to solve!

Here is the sum.

BUT WAIT! Since I SUBTRACTED ____ from the addend, I now need to ADD ____ to the sum.

The sum is ____.

128+38 → 128+___ → ___ → ___ - ___ → ___

I can make the 38 into a friendly number by adding ____.

This is an easier equation to solve!

Here is the sum.

BUT WAIT! Since I added ___ to the addend, I now need to take ___ away from the sum.

The sum is ____.

Let's Practice
COMPENSATING

Solve the equations below. Try using the compensation strategy in your head. If you still need to write your work down, then use the white space inside each box.

345+28=_____	56+18=_____	38+49=_____
122+118=_____	63+19=_____	256+131=_____
381+266=_____	46+46=_____	121+22=_____
483+9=_____	55+17=_____	15+19=_____

Snowball COMPENSATION

Use the compensation strategy to solve the equations below. If you need to write down your "thinking," use a scrap piece of paper.

346+29=

183+122=

4707+1219=

2573+2219=

564+37=

286+118=

446+39=

525+32=

352+137=

2051+1107=

3012+19=

2462+317=

2222+48=

3740+148=

38+48=

189+26=

253+212=

1376+1111=

364+218=

255+18=

477+22=

299+8=

268+29=
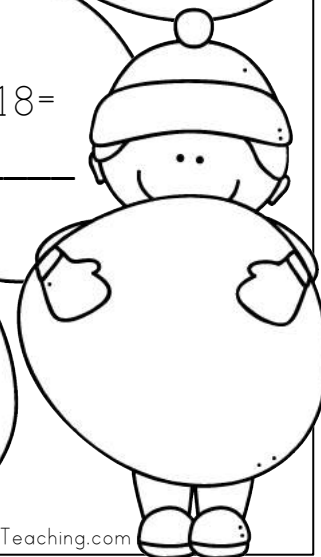
Putting It All Together
ADDITION GRID

Add any two numbers that are touching each other. Then shade the numbers and write the equations below. Use any of the strategies that you have learned so far.

45	9	174	204	2000	3000	1283	213
342	500	2142	2320	119	2451	2313	805
300	410	2004	5022	3489	1210	100	398
700	482	1006	6351	2451	2247	1000	6000
3000	6411	2324	5560	2736	1090	300	2400
1903	253	200	137	400	236	118	152
357	100	372	157	1111	264	210	519
4088	2000	351	100	462	263	233	145

Example: 357+100=457

_____ + _____ = _____   _____ + _____ = _____

_____ + _____ = _____   _____ + _____ = _____

_____ + _____ = _____   _____ + _____ = _____

_____ + _____ = _____   _____ + _____ = _____

_____ + _____ = _____   _____ + _____ = _____

_____ + _____ = _____   _____ + _____ = _____

Strategy #16: Find Compatible Numbers

Finding compatible numbers is a strategy that students can use to add efficiently when they are adding 3 addends. In this level, students will learn how to choose the two easiest addends to add first, and then add the third addend.

Here is an example of how the compatible number strategy works:

19+25+1 $\longrightarrow$ 19+1=20 $\longrightarrow$ 20+25 $\longrightarrow$ 45

It makes sense to add the 19 and 1 first, since that makes the friendly number 20.

Now we can add the other addend: the "25."

The sum is 45.

Here's another example:

16+25+5 $\longrightarrow$ 25+5=30 $\longrightarrow$ 30+16 $\longrightarrow$ 46

It makes sense to add the 25 and 5 first, since that makes the friendly number 30.

Now we can add the other addend: the "16."

The sum is 46.
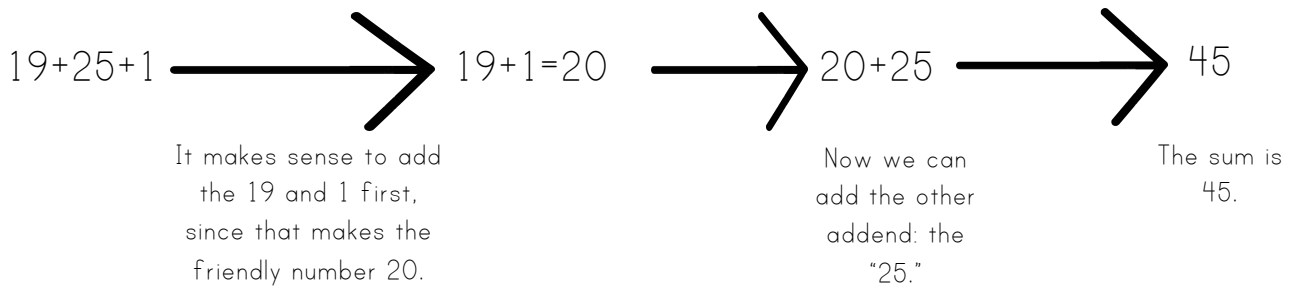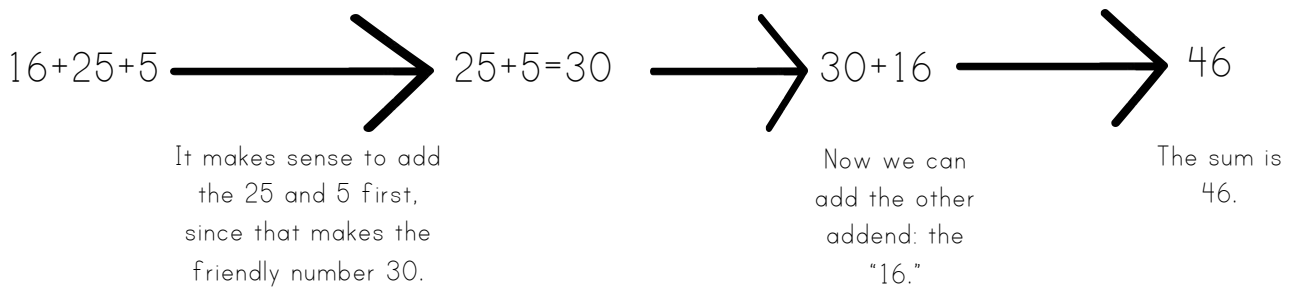
FINDING COMPATIBLE NUMBERS

When you add more than 2 numbers together, try to look for compatible numbers that make it more efficient to add. Here's an example:

$19+25+1 \longrightarrow 19+1=20 \longrightarrow 20+25 \longrightarrow 45$

Let's add the 19 and the 1 first. This will make a friendly number!

19 and 1 makes the friendly number 20.

Now let's add the last addend: the 25.

The sum is 45.

Now it's your turn!

$25+17+5 \longrightarrow 25+5=\underline{\quad} \longrightarrow 30+17 \longrightarrow \underline{\quad}$

Let's add the 25 and 5 first. This will make a friendly number!

25 and 5 makes the friendly number ____.

Now let's add the last addend: the 17.

The sum is ____.

$43+10+90 \longrightarrow 10+90=\underline{\quad} \longrightarrow 100+43 \longrightarrow \underline{\quad}$

Let's add the 10 and 90 first. This will make a friendly number!

10 and 90 makes the friendly number ____.

Now let's add the last addend: the 43.

The sum is ____.

$108+42+12 \longrightarrow 108+12=\underline{\quad} \longrightarrow 120+42 \longrightarrow \underline{\quad}$

Let's add the 108 and 12 first. This will make a friendly number!

108 and 12 makes the friendly number ____.

Now let's add the last addend: the 42.

The sum is ____.

$6+34+100 \longrightarrow \underline{\quad}+\underline{\quad}=\underline{\quad} \longrightarrow \underline{\quad}+\underline{\quad} \longrightarrow \underline{\quad}$

Let's
FIND COMPATIBLE NUMBERS

For each equation, underline the two numbers that can be added to make a friendly number (these are called "compatible numbers."). Add those numbers first, and then add the third addend to find the sum. If you need to write down your thinking, use the white space.

50+67+50=_____	19+11+25=_____	6+15+34=_____
146+30+70=_____	17+13+12=_____	55+20+20=_____
245+20+60=_____	140+50+8=_____	40+80+30=_____
435+235+5=_____	215+10+5=_____	19+140+1=_____

MAKE IT EASIER WITH
COMPATIBLE NUMBERS

Solve the equations by adding the compatible numbers first.

45+100+15=_____   450+150+29=_____   46+56+14=_____

33+7+43=_____   10+12+40=_____   19+24+31=_____

124+90+6=_____   67+122+23=_____   25+13+25=_____

Write and solve 8 equations. Make sure that you challenge yourself!

____ + ____ + ____ = _____

____ + ____ + ____ = _____

____ + ____ + ____ = _____

____ + ____ + ____ = _____

____ + ____ + ____ = _____

____ + ____ + ____ = _____

____ + ____ + ____ = _____

____ + ____ + ____ = _____

In Group 1 there are 13 people. In Group 2 there are 14 people. In Group 3 there are 16 people. How many people are in Groups 1, 2, and 3 altogether?

List 6 sets of compatible numbers (numbers that can be added to make a friendly number).

_____, _____   _____, _____

_____, _____   _____, _____

_____, _____   _____, _____

Two kids had a lemonade stand. On Friday they sold 28 cups of lemonade. On Saturday they sold 32 cups of lemonade. On Sunday they only sold 9 cups. How many cups of lemonade did they sell in all?

Putting IT ALL Together

Use any of the strategies that you have learned so far to complete these activities.

TRUE AND FALSE

Circle the equations that are true. Draw a rectangle around the equations that are false.

4567+3000=7567	567+29=596	357+11=368
60+800=140	3000+5000=7000	25+10+15=50
325+413=738	1248+1451=2559	58+6=63
416+200+300=816	2000+2324=3324	400+600=1000

Fill in the missing number for each equation. Use any of the strategies that you have learned so far.

| | 2467 | 3112 |

| | 28 | 100 | 80 |

| 5000 | | 1000 |

| | 48 | 12 | 23 |

| 5798 | 4598 | |

| | 600 | 400 |

| 1000 | | |

| | 1345 | 7362 |

| | 325 | 415 |
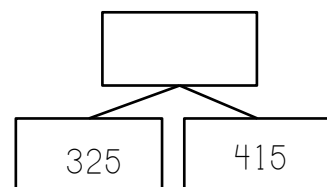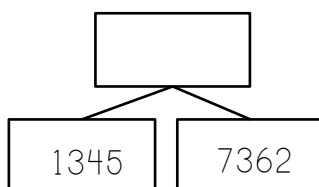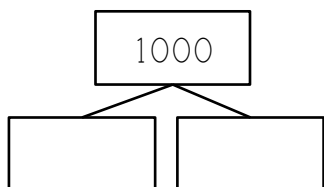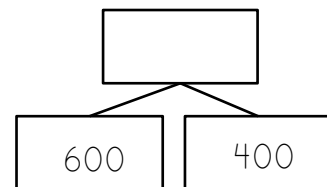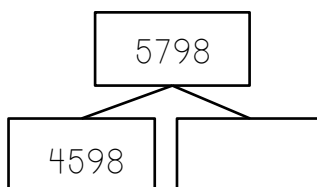
Putting It All Together

Your students have now learned all of the strategies in The {Grade Four} Addition Station. By now your students should have a good understanding of many different mental math strategies. They should be working on using the most effective and efficient one for each equation.
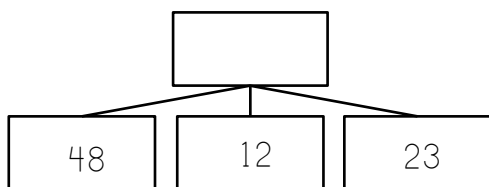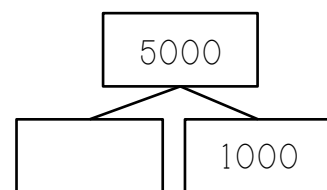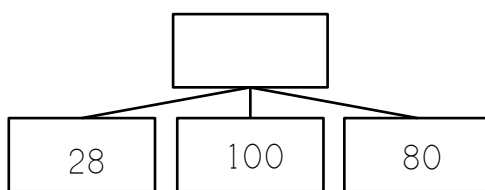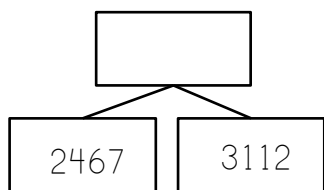
Some of the strategies in this Addition Station are complex. Your students may require manipulatives such as base 10 blocks, or simply a paper and pencil when solving some of the equations. If it helps understanding, encourage students to use manipulatives as much as they need to. You will likely find that they gradually move away from manipulatives and toward doing all of the equations mentally.

This final level is included as a "Putting It All Together" Level. In this level, students will practice all of the strategies that they have learned. They will practice choosing the strategy that is best.

You may also notice that students are using their own strategies rather than the ones that they have learned. They may be manipulating numbers in different ways that work better for them. This should be encouraged! The goal of mental math is to teach students how to think flexibly in order to make the equation faster and easier to solve.

Equation Hunt

Add up any two numbers that are touching. Shade them in and write the equation (with the sum) in the box.

60	4000	245	20	2387	1190	2201	4500	400	340
2000	1000	974	243	1080	2511	500	400	90	330
755	203	400	210	561	300	5062	612	400	5000
2774	1212	6000	249	2500	406	333	2101	6221	3000
5122	5000	453	220	401	462	1000	100	226	155

2000+755=2755

226+155=381

____ + ____ = ____   ____ + ____ = ____   ____ + ____ = ____

____ + ____ = ____   ____ + ____ = ____   ____ + ____ = ____

____ + ____ = ____   ____ + ____ = ____   ____ + ____ = ____

____ + ____ = ____   ____ + ____ = ____   ____ + ____ = ____

____ + ____ = ____   ____ + ____ = ____   ____ + ____ = ____
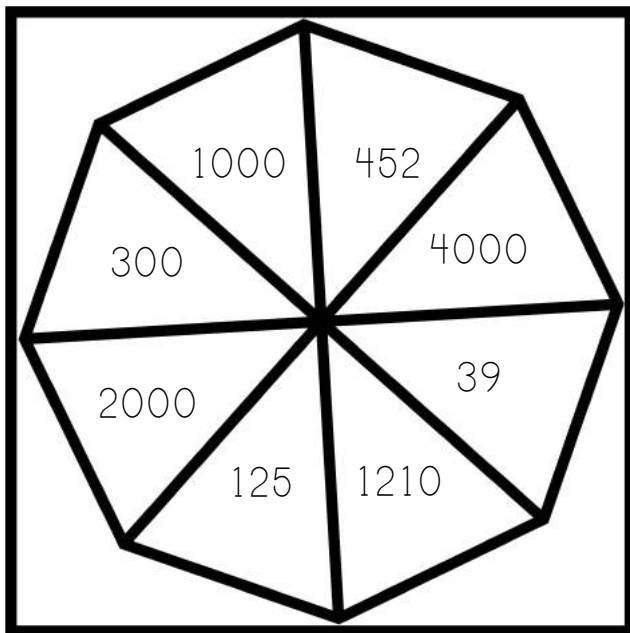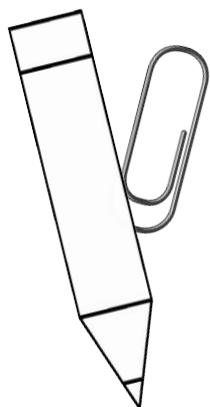
____ + ____ = ____   ____ + ____ = ____

Add It Up!

Use a paper clip and pencil to spin a number on the spinner. Then write it in any equation below and find the sum.

1000	452
300	4000
2000	39
125	1210

150+_____=_____

2000+_____=_____

2452+_____=_____

1004+_____=_____

462+_____=_____

57+_____=_____

1482+_____=_____   1551+_____=_____   670+_____=_____

3000+_____=_____   800+_____=_____   5013+_____=_____

600+_____=_____   2500+_____=_____   533+_____=_____

Write any equation and represent it on the number line below:

_____ + _____ = _____

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Problem-Solving

Trent's farm has been around for 3 generations. Trent's grandpa farmed the land for 45 years. Trent's dad farmed the land for 35 years. Trent has been farming it for 13 years. In all, how many years has Trent's farm been around for?

┌─ Show your work. ─┐   ┌─ Write an answer sentence. ─┐

_____

_____

_____

_____

In 2012, 4678 people visited the museum. In 2013, 2000 more visited than in 2012. In 2014, 1000 more people visited the museum than in 2013. How many people visited the museum in 2014?

┌─ Show your work. ─┐   ┌─ Write an answer sentence. ─┐

_____

_____

_____

_____

1243 people live in the apartment building. 49 more people move in. Now how many people live in the apartment building?

┌─ Show your work. ─┐   ┌─ Write an answer sentence. ─┐

_____

_____

_____

_____