Name _____ Class _____ Date _____

GET STARTED

1 $6 + 6 =$ _____

2 $9 + 9 =$ _____

3 $6 + 7$

○ ○ ○ ○ ○ ○ ○
○ ○ ○ ○ ○ ○

_____ + _____ + 1 =

_____ + 1 = _____

4 $8 + 4$

8, _____, _____, _____, _____

$8 + 4 =$ _____

BUILD THE CONCEPT

Charles has 5 **crayons**. The teacher gives him 4 more crayons. Kirby has 4 crayons. The teacher gives her 5 more crayons. **How many** crayons does each of them **have in all?**
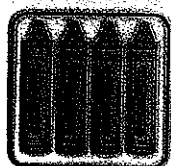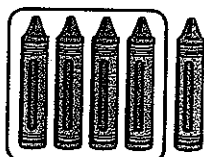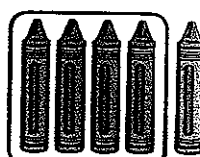
Charles: 5   +   **4**
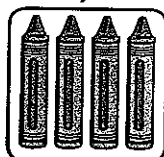
_____ + _____ = _____

_____ + 1 = _____

Kirby: 4   +   5

_____ + _____ = _____

_____ + 1 = _____

Charles and Kirby each have _____ crayons.

TRY IT TOGETHER

Find each sum.

5 $3 + 4 = $ _____

▲ ▲ ▲   ▲ ▲ ▲ ▲

_____ + _____ + 1 =

_____ + 1 = _____

6 $5 + 7 = $ _____

7, _____, _____, _____, _____, _____

7 $4 + 9 = $ _____

8 $7 + 8 = $ _____

WORK ON YOUR OWN

Add Whole Numbers

HOW TO

Using Symbols	Using Words
1. $7 + 6$ $6 + 6 + 1 =$ $12 + 1 = 13$ So, $7 + 6 = 13$.	Find a doubles addition fact with the two addends. Double the lesser addend, then add the remaining 1 to the sum.
2. $8 + 2$ 8, 9, 10 So, $8 + 2 = 10$.	If doubles plus 1 cannot be used, use the counting on strategy. Begin with the greater addend and count on from that addend to find the sum.

Commutative and Associative Properties of Addition

Name _____ Class _____ Date _____

GET STARTED

1 Marcus has 3 video games. He receives 2 more as gifts. How many total video games does Marcus have?

_____ + _____ = _____ video games

2 a. 🧢🧢 + 🧢🧢🧢

_____ + _____ = _____ hats

b. 🧢🧢🧢 + 🧢🧢

_____ + _____ = _____ hats

3 a. (🖍🖍🖍 + 🖍) + 🖍🖍 = 🖍🖍🖍🖍 + 🖍🖍 = 🖍🖍🖍🖍🖍🖍

(_____ + _____) + _____ = _____ + _____ = _____ crayons

b. 🖍🖍🖍🖍 + (🖍 + 🖍🖍) = 🖍🖍🖍🖍 + 🖍🖍🖍 = 🖍🖍🖍🖍🖍🖍🖍

_____ + (_____ + _____) = _____ + _____ = _____ crayons
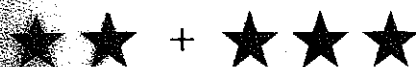
BUILD THE CONCEPT

★★ + ★★★   [ ] + [ ]

_____ + _____ = _____   _____ + _____ = _____

TRY IT TOGETHER

Rewrite each addition problem using the Commutative or Associative Property of Addition. Then solve.

4 $7 + 5 =$ _____ $+$ _____ $=$ _____

5 $8 + 1 =$ _____ $+$ _____ $=$ _____

6 $(6 + 9) + 1 =$ _____ $+ ($_____ $+$ _____$)$

$\qquad =$ _____ $+$ _____ $=$ _____

7 $2 + (3 + 6) = ($_____ $+$ _____$) +$ _____

$\qquad =$ _____ $+$ _____ $=$ _____

WORK ON YOUR OWN

Use the Commutative and Associative Properties of Addition   **HOW TO**

Using Symbols	Using Words
$7 + 6 = 6 + 7$	**Commutative Property of Addition:**
$7 + 6 = 13$	Changing the order of the addends does not
$6 + 7 = 13$	affect the sum.
$(4 + 5) + 5 = 4 + (5 + 5)$	**Associative Property of Addition:**
$(4 + 5) + 5 = 9 + 5 = 14$	Grouping the addends in any order does not
$4 + (5 + 5) = 4 + 10 = 14$	affect the sum.

Using a Problem-Solving Plan

Name _____ Class _____ Date _____

1 $9 + 1 =$ _____

2 $9 + 5 =$ _____

3 $7 + 6 =$ _____

4 Mike has 5 goldfish in his pond. He buys 7 more goldfish at the pet store and adds them to the pond. How many goldfish are in the pond now?

a. **Find:** _____

b. **How?** _____

c. **Solve.** _____ + _____ = _____ **goldfish**

d. **Is the answer reasonable? Explain.** _____

_____

TRY IT TOGETHER

Solve the problem.

5 Yesterday, 4 chicks hatched. Today, 2 chicks hatched. There are 6 other eggs in the nest that will hatch. After all the eggs hatch, how many chicks will there be?

a. **Find:** _____

b. **How?** _____

c. **Solve.** _____ + _____ = _____

  _____ + _____ = _____ chicks

d. **Is the answer reasonable? Explain.** _____

  _____

  _____

WORK ON YOUR OWN

HOW TO

Solve a Problem Using a Problem-Solving Plan

Julie has 6 marbles in a bag. John gives her 4 more. How many marbles does Julie have in all?

1. Find: how many marbles Julie has in all

2. How? Add 6 and 4.

3. Solve. $6 + 4 = 10$ marbles

4. Is the answer reasonable? Explain. Yes, because, using the counting on strategy, starting at 6 and counting on 4 more gives 10.

Understanding Subtraction

Name_____ Class _____ Date _____

GET STARTED

1. Julie has 8 new trading cards. She has 6 old trading cards. How many trading cards does she have in all? _____ + _____ = _____ trading cards

2. _____ mailboxes in all   _____ mailboxes crossed out

   _____ − _____ = _____ mailboxes left

3. Steve's cat had 7 kittens. He gave 4 kittens away. How many kittens are left?

   _____ − _____ = _____ kittens left

4. Joy has 9 silver dollar fish in her fish tank. She also has 5 angelfish. How many more silver dollar fish than angelfish does Joy have?

   _____ − _____ = _____ silver dollar fish

5. $8 - 6 =$ _____

BUILD THE CONCEPT

Joan had 10 students in her gymnastics class. Four students moved up to the next class. How many students are left in Joan's class?
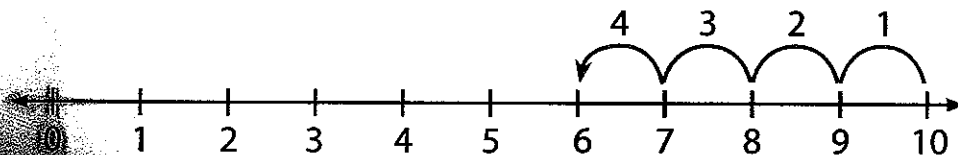
_____ − 4 = _____

There are _____ students left in Joan's gymnastics class.

TRY IT TOGETHER

Solve each problem.

6 There are 10 turtles on a log. Then 5 turtles crawl away. How many turtles are left on the log?

_____ − _____ = _____ turtles

7 Ava has 12 balloons. David has 4 balloons. How many more balloons does Ava have than David?

_____ − _____ = _____ balloons

8 15 − 6 = _____

WORK ON YOUR OWN

Subtract Two Numbers

Using Symbols	Using Words
1. 11 − 5 11 ..., 10, 9, 8, 7, 6	Begin with the larger number and count back, or take away, the smaller number.
2. So 11 − 5 = 6.	The result is called the difference.

Addition and Subtraction Fact Families

Name _____ Class _____ Date _____

1 $5 + 4 =$ _____   **$4 + 5 =$** _____

2 $9 - 4 =$ _____ $9 - 5 =$ _____

3 $5 + 4 = 9$ $9 - 4 = 5$

$4 + 5 = 9$ $9 - 5 = 4$ _____, _____, _____

4 $4, 7, 11$

$4 + 7 =$ _____ $11 - 7 =$ _____

$7 +$ _____ $=$ _____ $11 -$ _____ $=$ _____

Use the model to find the difference of 8 and 3.

⚫⚫⚫ ⚫ ⚫ ⚫ ⚫ ⚫
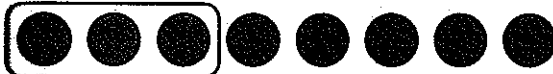
$3 \quad + \quad$ _____ $\quad = 8$

So, $8 - 3 =$ _____.

BUILD THE CONCEPT

TRY IT TOGETHER

Write the addition and subtraction facts for each fact family.

5 6, 14, 8

____ + ____ = ____   14 − ____ = ____

____ + ____ = ____   14 − ____ = ____

6 5, 5, 10

____ + ____ = ____   10 − ____ = ____

7 7, 8, 15

____ + ____ = ____   ____ − ____ = ____

____ + ____ = ____   ____ − ____ = ____

WORK ON YOUR OWN

HOW TO

Writing Addition and Subtraction Fact Families

Using Symbols

Addition Facts	Subtraction Facts
$3 + 4 = 7$	$7 − 4 = 3$
$4 + 3 = 7$	$7 − 3 = 4$
$4 + 4 = 8$	$8 − 4 = 4$

Using Words

Two addends and their sum make a fact family. Each fact in a fact family uses the same three numbers. The three numbers in a fact family make two addition facts and two subtraction facts.

If the two addends are the same, the three numbers make one addition fact and one subtraction fact.

Problem-Solving: Finding Patterns

Name _____ Class _____ Date _____

GET STARTED

1. 24, 21, 18, 15, _____

2. 0, 2, 4, 6, 8, _____

3. José and Brett played a game. José played the first 4 turns. He clapped his hands like this: 2 claps, 4 claps, 6 claps, 8 claps. Brett continued the pattern. How many times did Brett clap?

   a. **Find:** _____

   b. **How?** _____

      2, 4, 6, 8, _____

   c. **Solve.** Rule: _____

      Brett clapped _____ times.

   d. **Is the answer reasonable? Explain.** _____

      _____

4. How many times did Brett clap next? _____ times

TRY IT TOGETHER

Use a pattern to solve each problem.

5 Megan placed 18 cards in the first row, 15 cards in the second row, 12 cards in the third row, and 9 cards in the fourth row. If she continues this pattern, how many cards will she place in the fifth row?

a. **Find:** _____

b. **How?** _____

c. **Solve.** Rule: _____

      18, 15, 12, 9, _____

      There will be _____ cards in the **fifth row.**

d. **Is the answer reasonable? Explain.** _____

_____

6 How many cards will be in the sixth row? _____ cards

WORK ON YOUR OWN

Solve a Problem by Finding Patterns

HOW TO

Howard collects marbles. The first week he had 4 marbles. In the second week he had 8 marbles. In the third week he had 12 marbles. If this pattern continued, how many marbles would Howard have in the fourth week?

1. Find: how many marbles Howard would have in the fourth week

2. How? Find the pattern.

3. Solve. Rule: Count forward by 4.

      4, 8, 12, 16

      Howard will have 16 marbles in the fourth week.

4. Is the answer reasonable? Explain. Yes, because 12 plus 4 is equal to 16.
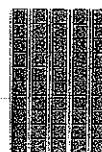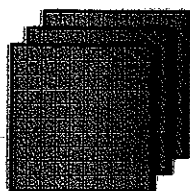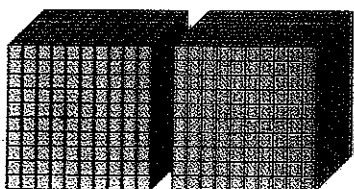
New Vocabulary
digit
expanded notation
place value
period
thousands period

Place Value and Expanded Notation

Name _____ Class _____ Date _____

GET STARTED

①

② a. _____ thousands   _____ hundreds   _____ tens   _____ ones

   b. _____   _____   _____   _____

③

Thousands Period			Ones Period		
Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Ones
_____	_____	_____			
_____	_____	_____			
_____	_____	_____			
_____	_____	_____			
_____	_____	_____			

26,541 = _____ + _____ + _____ + _____ + _____

BUILD THE CONCEPT

Ones Period		
Hundreds	Tens	Ones

653 = _____ hundreds + _____ tens + _____ ones

653 = _____ + _____ + _____

Writing Whole Numbers Through Millions Using Words

Name _____ Class _____ Date _____

GET STARTED

1 467
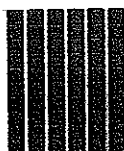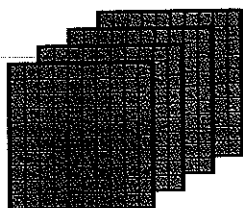
a. _____ hundreds _____ tens _____ ones

b. _____ _____ _____

c. _____ _____ _____

2

Millions Period			Thousands Period			Ones Period		
Hundred Millions	Ten Millions	Millions	Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Ones
		6	0	9	2	6	2	0

_____ million, _____ thousand, _____

3 4,000,007 _____, _____

Standard Form	2,003,110
Word Form	two _____, three thousand, _____ hundred _____
Expanded Form	2,000,000 + _____ + _____ + _____

TRY IT TOGETHER

Write each number using words.

4 2,005,908 _____ , _____ , _____

5 500,002 _____

6 8,670,060 _____

7 3,050,000 _____

WORK ON YOUR OWN

Write Whole Numbers Through Millions Using Words

Using Symbols	Using Words
1. 2,010,009 **two million,**	Write words for the **number of millions.** Write the word *million* and a comma. If there are no millions, do not write anything.
2. 2,010,009 **two million, ten** **thousand,**	**Write words for the number of thousands. Write the word *thousand* and a comma. If there are no thousands, do not write anything.**
3. 2,010,009 two million, ten thousand, **nine**	Write words for the number of ones. If there are no ones, do not write anything.

HOW TO

Writing Whole Numbers Through Millions Using Digits

Name _____ Class _____ Date _____

GET STARTED

Hundred Millions	Ten Millions	Millions	Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Ones
		1	1	0	1	0	0	0

1. _____ million, _____ thousand

2. eight thousand, sixty-four _____

3. three hundred twenty-seven thousand, three _____

4. two million, three hundred four thousand _____

5. five million, seven _____

BUILD THE CONCEPT

Expanded Form	20,000 + 5,000 + 200 + 10 + 5
Word Form	twenty-five _____, two _____ fifteen
Standard Form	_____

Write each number using digits.

6 three million, five hundred twenty thousand, seventy-one _____

7 two million, seven hundred thousand, nine hundred six _____

8 four million, three hundred two thousand _____

9 two hundred thousand, three _____

WORK ON YOUR OWN

Write Whole Numbers Through Millions Using Digits

HOW TO

Using Symbols	Using Words
1. two million, thirty-three thousand, thirteen 2,	Write the digit(s) for the words to the left of the word *million*. Write a comma to the right of the digit(s).
2. two million, **thirty-three thousand,** thirteen **2,033,**	Write the digit(s) for the words to the left of the word *thousand*. Write a comma to the right of the digit(s). If there are millions and the word *thousand* is not there, write three 0s followed by a comma.
3. two million, thirty-three thousand, thirteen 2,033,013	Write the digit(s) for the **words in the ones** period. If there are no words to the right of the word *thousand*, write three 0s.

Comparing Whole Numbers

Name _____ Class _____ Date _____

GET STARTED

1 six million, three hundred seven thousand, five hundred seventeen _____

2 3   8   **3** 83   43   **4** 15   12

5 6,711,519   6,711,419

Millions	Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Ones

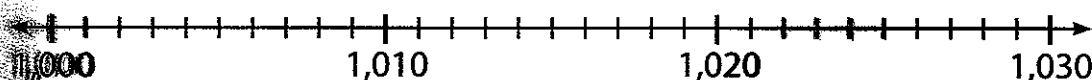**6** 403,847   3,808,214

Millions	Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Ones

7 8,101,902   8,101,902

Millions	Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Ones

BUILD THE CONCEPT

Compare 1,012 and 1,022.

```
|————|————|————|————|————|————|————|————|————|————|————→
1,000            1,010            1,020            1,030
```

1,012 ☐ 1,022