

Practice

1. Fill in the missing numbers. Write the pattern rule.

a) 58, 56, 54, _____, _____, _____

b) 75, 65, 55, _____, _____, _____

c) 68, 65, 62, _____, _____, _____

2. a) Shade a decreasing number pattern on the hundred chart. Write the pattern rule.

100	99	98	97	96	95	94	93	92	91
90	89	88	87	86	85	84	83	82	81
80	79	78	77	76	75	74	73	72	71
70	69	68	67	66	65	64	63	62	61
60	59	58	57	56	55	54	53	52	51
50	49	48	47	46	45	44	43	42	41
40	39	38	37	36	35	34	33	32	31
30	29	28	27	26	25	24	23	22	21
20	19	18	17	16	15	14	13	12	11
10	9	8	7	6	5	4	3	2	1

b) Circle a different decreasing number pattern on the hundred chart. How are your patterns the same? How are they different?

3. Kazuo had twenty-four dollars. Each day he spent two dollars.

How much money did Kazuo have after 8 days? _____

Stretch Your Thinking

Suppose you start at 95 and count back to 35.

a) If you count back by 10s, will you say 60? How do you know?

b) If you count back by 5s, will you say 50? How do you know?

Counting Large Collections

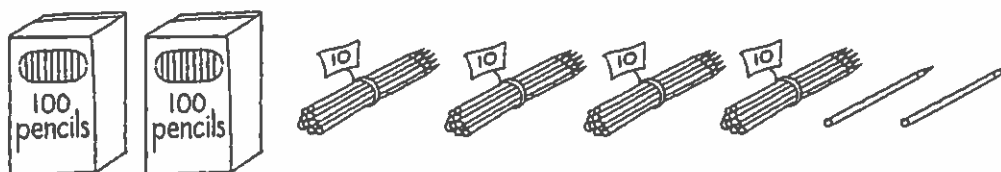


Quick Review

One way to count a large collection is to make groups of tens and hundreds.

- Count the pencils.

There are two groups of 100, four groups of 10, and two 1s.



There are two hundred forty-two pencils.

- Draw a collection of 331 toy dinosaurs.

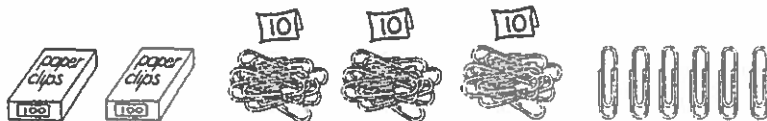
Think: I need to draw 3 tubs of 100 dinosaurs, 3 smaller tubs of 10 dinosaurs, and 1 single dinosaur.



Count to check: 100, 200, 300, 310, 320, 330, 331

Try These

- How many? Record your count.



- Fill in the missing numbers.

101	102	103			106	107			110
			114				118	119	
	122				126			129	

Practice

1. How many? Record your count.

a)



b)



2. Draw pictures to represent each number.
Tell the number of hundreds, tens, and ones.

a) 158



b) 461



Stretch Your Thinking

Suppose all the craft sticks in question 1 are put together.

a) How many hundreds are there? _____

b) How many tens? _____

c) How many ones? _____

d) What number is that? _____

Modelling 3-Digit Numbers

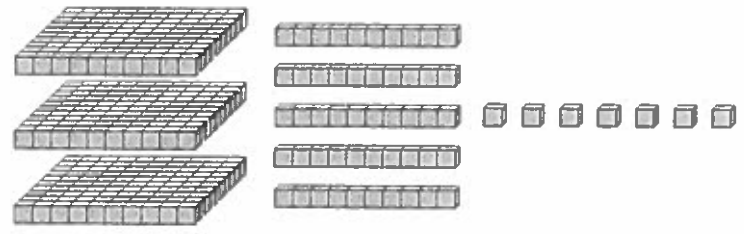


Quick Review

Our number system is based on groups of 10.

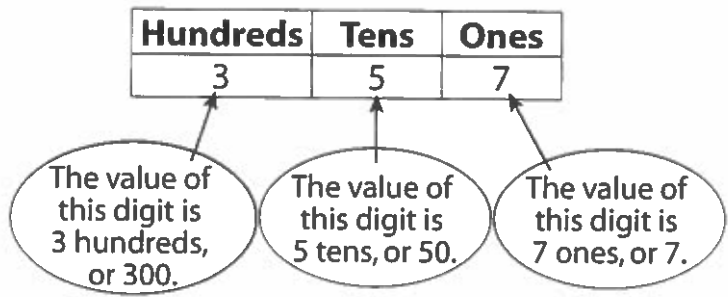
100 one hundred 1 hundred = 10 tens	10 ten 1 ten = 10 ones	1 one

Here is one way to model 357.



The base-ten name is
3 hundreds 5 tens 7 ones.

In words:
three hundred fifty-seven



Try These

- Draw a picture to show each number.
Use squares for flats, sticks for rods, and dots for cubes.
 - 256
 - 460
 - 809

Practice

1. Write the number for each base-ten name.

a) 6 hundreds 4 tens 5 ones _____ b) 4 hundreds 7 tens _____

c) 7 hundreds 2 tens 1 one _____ d) 8 hundreds 4 ones _____

2. Write the base-ten name for each number.

a) 158 _____

b) 562 _____

c) 209 _____

d) 630 _____

3. Find two 3-digit numbers in a newspaper or magazine.

Record these numbers in the chart.

Draw a picture and write the base-ten name for each number.

Number	Picture	Base-Ten Name

Stretch Your Thinking

Stamps are sold in booklets of 100, 50, and 10.

Find as many different ways to buy 200 stamps as you can.

Record your work in the chart.

100s									
50s									
10s									

Showing Numbers in Many Ways



Quick Review

Here are different ways to show 340.

Picture:

Base-ten name: 3 hundreds 4 tens

Base Ten Blocks:

Place-value chart:

Hundreds	Tens	Ones
3	4	0

Standard form: 340

You can use Base Ten Blocks to show 340 in different ways:



Try These

1. Write each number in standard form.

- a) 7 hundreds 4 tens 6 ones _____ b) 8 tens _____
 c) 9 hundreds 8 tens 3 ones _____ d) 5 hundreds 2 ones _____

2. Write the base-ten name for each number.

- a) 627 _____
 b) 209 _____
 c) 463 _____

Practice

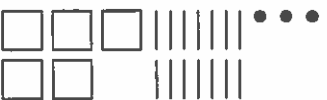

1. Draw a picture to show each number. Use the fewest Base Ten Blocks.

a)	b)	c)
521	309	264

2. Draw a picture of Base Ten Blocks to show 421 in 3 different ways.

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3. Draw a new picture for each number using the fewest blocks. Then write each number in standard form.

Picture	Picture	Standard Form
		
		

Stretch Your Thinking

- Draw a picture of Base Ten Blocks.
Show 315 using exactly 36 blocks.

Comparing and Ordering Numbers



Quick Review

You can use place value to **compare** and **order** numbers.

► To compare 524 and 528:

1. Compare hundreds.

524

528

Both have 5 hundreds, or 500.

2. Compare tens.

524

528

Both have 2 tens, or 20.

3. Compare ones.

524

528

4 ones are less than 8 ones.

So, 524 is less than 528

$$524 < 528$$

and

528 is greater than 524.

$$528 > 524$$

► To order 846, 597, and 848, compare each digit.

Hundreds	Tens	Ones
8	4	6
5	9	7
8	4	8

597 has the fewest hundreds, so it is the least number. 848 and 846 have the same number of hundreds and tens. 846 has fewer ones than 848. So, $846 < 848$.

The order from least to greatest is 597, 846, 848.

The order from greatest to least is 848, 846, 597.

Try These

1. Write $<$ or $>$ to make a true statement.

a) $845 \square 863$

b) $714 \square 703$

c) $452 \square 396$

2. Circle the greatest number.

a) 573 68 329 592

b) 925 936 919 931

c) 608 680 724 691

d) 357 624 639 620

Practice

1. Write a number to make each statement true.

a) $445 > \underline{\quad}$ b) $799 < \underline{\quad}$ c) $704 < \underline{\quad}$ d) $628 < \underline{\quad}$

2. Order the numbers from least to greatest.

a) 826, 527, 504, 817 _____

b) 634, 700, 629, 701 _____

c) 358, 324, 196, 238 _____

3. Order the numbers from greatest to least.

a) 584, 435, 581 _____

b) 870, 973, 970 _____

4. Use the digits 4, 9, and 6. Make as many 3-digit numbers as you can.

Order the numbers from least to greatest.

5. The chart shows how far some students travelled on their holidays.

Who travelled:

a) the greatest distance? _____

b) the least distance? _____

c) further than David
but not as far as Enrique? _____

Name	Distance Travelled
David	825 km
Serena	850 km
Mabel	990 km
Enrique	900 km

Stretch Your Thinking

Use the clues to find the mystery number.

➤ The number is less than 800 but greater than 780.

➤ It has 8 more tens than ones. _____

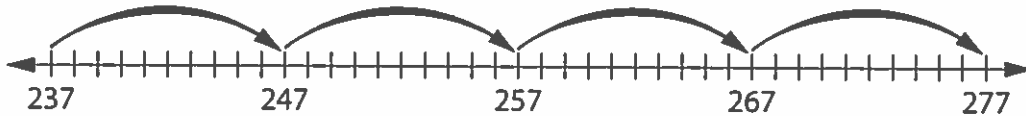
Counting by 5s, 10s, 25s, and 100s



Quick Review

We can use a **number line** to count.

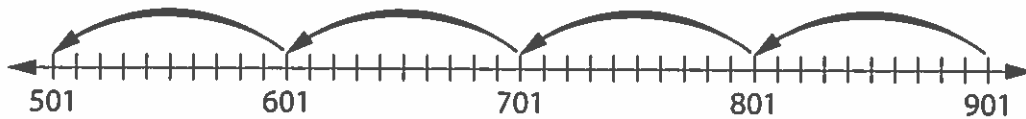
- To count on by 10s, start anywhere.



- To count on or back by 25s, start at a number that ends in 25, 50, 75, or 00.



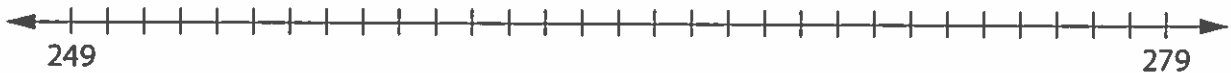
- To count on or back by 100s, start anywhere.



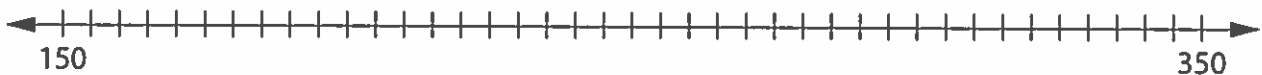
Try These

1. Use the number lines.

- a) Start at 249. Count on by 5s to 279.



- b) Start at 350. Count back by 25s to 150.



2. Fill in the missing numbers.

- a) 145, 245, _____, 445, _____ b) 150, _____, 200, _____, 250
 c) _____, 294, 289, 284, _____ d) _____, 727, _____, 527, 427

Practice

1. Start at 370.

Count on by 5s: _____, _____, _____, _____, _____, _____, _____

Count on by 10s: _____, _____, _____, _____, _____, _____, _____

Count on by 100s: _____, _____, _____, _____, _____, _____, _____

2. Start at 850.

Count back by 5s: _____, _____, _____, _____, _____, _____, _____

Count back by 25s: _____, _____, _____, _____, _____, _____, _____

Count back by 100s: _____, _____, _____, _____, _____, _____, _____

3. Fill in the missing numbers.

Describe your pattern.

a) 153, 148, 143, _____, _____, _____

b) 563, 463, 363, _____, _____, _____

c) 417, 427, 437, _____, _____, _____

4. Find the missing numbers to complete each pattern.

Rewrite the patterns correctly.

a) 271, 371, 571, 671, 771 _____

b) 850, 825, 800, 750, 725 _____

c) 218, 208, 188, 178, 168 _____

Stretch Your Thinking

Suppose you started at 775 and counted back to 475.

What might you be counting back by?

Give as many answers as you can.

Skip Counting with Coins



Quick Review

You can skip count to find the value of coin collections.

- Each nickel is worth 5 cents. Count by 5s.



5, 10, 15, 20, 25, 30, 35, 40, 45

The nickels are worth forty-five cents.

- Each quarter is worth 25 cents. Count by 25s.



25, 50, 75, 100, 125, 150, 175, 200, 225

The quarters are worth two hundred twenty-five cents.

We say two dollars and twenty-five cents.

Try These

1. Draw dimes to show one dollar and sixty cents.

2. Draw nickels to show one dollar and ten cents.

Practice

1. Count the money. Write each amount in words.



2. Karl has four dollars in his piggy bank. All his coins are the same. What coins could he have? How many solutions can you find?

3. Tell how many of each coin make one dollar.

pennies _____ nickels _____ dimes _____
 quarters _____ loonies _____

Stretch Your Thinking

Aloma has 11 coins that are all the same.
 The value of her coins is two dollars and seventy-five cents.
 What coins does Aloma have? Draw a picture to show your answer.

Representing Numbers with Coins



Quick Review

There are many different ways to make three dollars and thirty-two cents.



Three loonies, 3 dimes, and 2 pennies



Two loonies, 13 dimes, and 2 pennies



Three loonies, 2 dimes, and 12 pennies

Try These

1. How much money is shown in each picture? Write the amount in words.



Practice

1. Yuri has four dollars and forty-six cents.
He only has dimes, pennies, and loonies.
What coins could he have?
Use numbers, words, or pictures to show 3 possible solutions.

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2. Use loonies, dimes, and pennies.
Show two dollars and sixty cents in 3 different ways.
Use numbers, words, or pictures to show each way.

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3. How many of each coin makes three dollars and twenty-seven cents?

- a) loonies 3 dimes pennies
b) loonies dimes 12 pennies
c) loonies dimes pennies 107

Stretch Your Thinking

Georgia has 24 coins that total five dollars and thirty-seven cents.
She only has loonies, dimes, and pennies. Draw Georgia's coins.

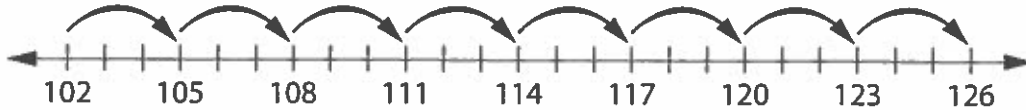
Counting by 3s and 4s



Quick Review

➤ To count on by 3s, say every third number.

- Start at 102. Count on by 3s: 102, 105, 108, 111, 114, ...

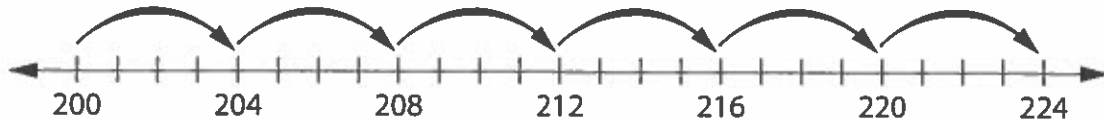


- Now start at 225. Count back by 3s: 225, 222, 219, 216, 213, ...

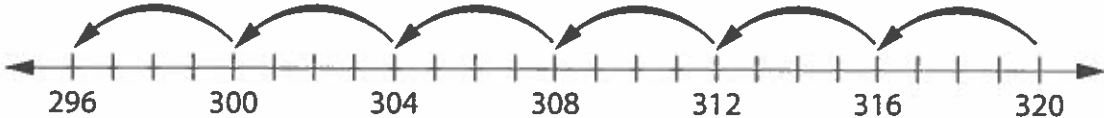


➤ To count on by 4s, say every fourth number.

- Start at 200. Count on by 4s: 200, 204, 208, 212, 216, ...



- Now start at 320. Count back by 4s: 320, 316, 312, 308, 304, ...



Try These

1. Fill in the missing numbers.

a) 150, 153, 156, _____, 162

b) 316, 312, 308, _____, 300

c) 408, 412, _____, _____, 424

d) 147, 144, _____, _____, 135

e) 309, 312, _____, _____, _____

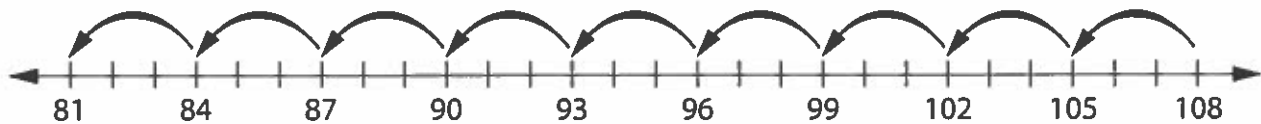
f) 160, 156, _____, _____, _____

Practice

1. Use the number line. Start at 240. Count on by 4s to 268.
Write the pattern in the ones digits.



2. Describe the pattern.



3. Find the mistakes in each pattern. Rewrite the patterns correctly.

a) 195, 198, 201, 203, 207 _____

b) 606, 609, 610, 615, 618 _____

c) 160, 156, 152, 148, 136 _____

4. Start at 504. Write the first 5 numbers in each pattern.

a) Count back by 4s. _____, _____, _____, _____, _____

b) Count on by 3s. _____, _____, _____, _____, _____

c) Count on by 4s. _____, _____, _____, _____, _____

d) Count back by 3s. _____, _____, _____, _____, _____

Stretch Your Thinking

Suppose you started at 100 on a number line and counted on by 4s.
How many jumps would you make before you reached 200?
Which numbers would be in your pattern?

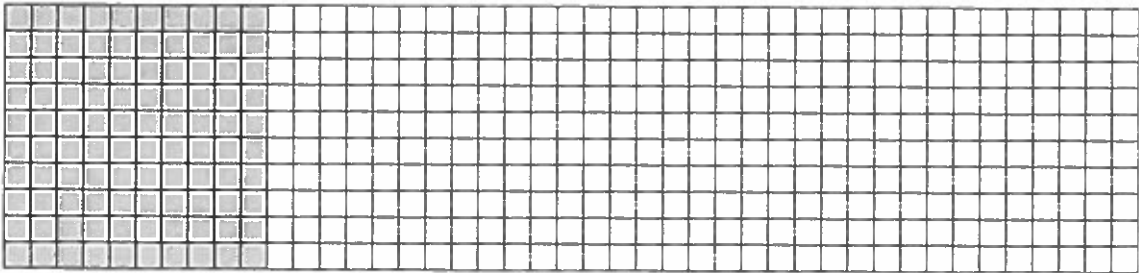
Estimating to 1000



Quick Review

There are 100 shaded squares on the grid.

We can use 100 as a **referent** to help estimate how many squares are on the whole grid.



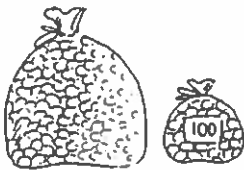
It looks like there is room for 4 groups of 100 on the whole grid.

$$100 + 100 + 100 + 100 = 400$$

A thoughtful estimate is 400 squares.

Try These

1. Estimate how many chestnuts are in the big bag.



2. Estimate how many marbles are in the jar.
How did you make your decision?

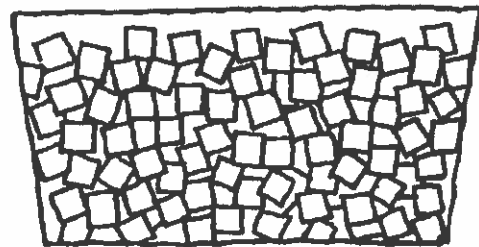


Practice

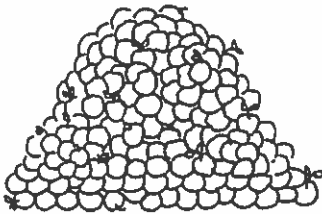
1. Fill a container with small objects, such as beads or pennies.
 - a) Estimate the number of objects in the container.
How did you make your estimate?

- b) Count the objects to check your estimate. _____

2. Suggest a way to estimate the number of cubes in the tub.



3. Choose the best estimate for the number of apples in the big pile: 205, 389, or 950. Explain your choice.



100

Stretch Your Thinking

Suppose you need about 500 cubes to build a robot. How could you predict if you have enough cubes without counting all of them?

How Much Is 1000?

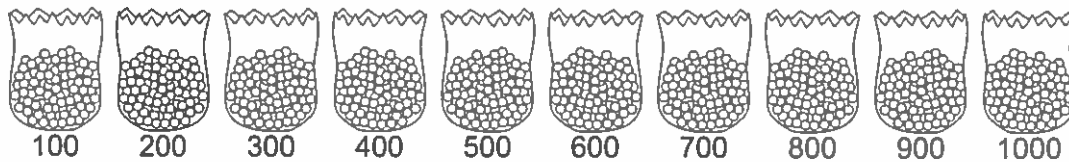


Quick Review

Ms. Henry has 10 bags of counters.

Each bag has 100 counters.

To find how many counters Ms. Henry has, you can count by 100s:

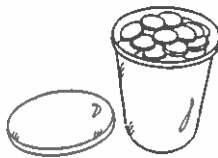


10 groups of 1 hundred make 1 **thousand**.

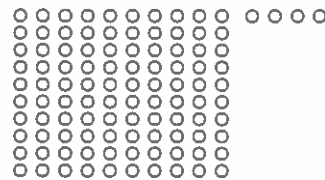
Sammy wants to find out how many yogurt containers 1000 counters will fill. Here is how he does it:



First Sammy estimates.



Then he fills a container with counters.



Sammy counts the counters.

There are 104.

Sammy thinks: It took 104 counters to fill one container.

104 is about 100.

10 hundreds make 1000.

So, 1000 counters will fill about 10 containers.

Try These

1. Draw pictures of Base Ten Blocks to show 1000 in 2 different ways.

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Practice

- Are there more than 1000 or fewer than 1000:
 - hairs on a horse? _____
 - grains of sand on the beach? _____
 - left-handed students in your school? _____
 - fingers and toes in your classroom? _____
- Name 3 places where you might see 1000 people.

- Ms. Mansfield is making geoboards for the students in her class. Each geoboard takes 100 pins. How many geoboards can Ms. Mansfield make with 1000 pins? Show how you know.
- Pumpkin seeds come in packages of 50. Mr. Conrad bought 1000 seeds. How many packages did he buy? Use pictures, numbers, or words to explain.

Stretch Your Thinking

Find as many ways as you can to buy exactly 1000 paper clips.



500						
250						
100						

Strategies for Addition Facts



Quick Review

Here are some strategies for addition.

- Use **near doubles**.

To find $7 + 8$, think:

$$7 + 7 = 14$$

$7 + 8$ is 1 more.

$$\text{So, } 7 + 8 = 15$$

- Make 10.

To find $7 + 5$, think:

$7 + 3$, plus another 2

Make 10.

$$7 + 5 = 12$$

- When you add, order does not matter.

$$2 + 6 = 6 + 2$$

$$\text{So, } 2 + 6 = 8$$

- When you add 0, the number does not change.

$$3 + 0 = 3$$

Try These

1. Add. Use doubles facts to help you.

a) $5 + 6 =$ _____

b) $5 + 4 =$ _____

c) $7 + 8 =$ _____

d) $8 + 9 =$ _____

e) $6 + 7 =$ _____

f) $4 + 5 =$ _____

2. Add. Use the facts for 10 to help you.

a) $9 + 5 =$ _____

b) $8 + 7 =$ _____

c) $8 + 4 =$ _____

d) $8 + 6 =$ _____

e) $5 + 8 =$ _____

f) $9 + 7 =$ _____