Numbers to

The Market

Chez Antoine

Tourtière
$10 each
3 for
$25

Bread
$3
each

Tourtière

Bread

WOODEN TOYS

Wooden toys $4 each

TOYS

Baskets of 10

Single cobs

100 cobs

Fresh corn

Blueberries $4 per basket

Guess the Number!

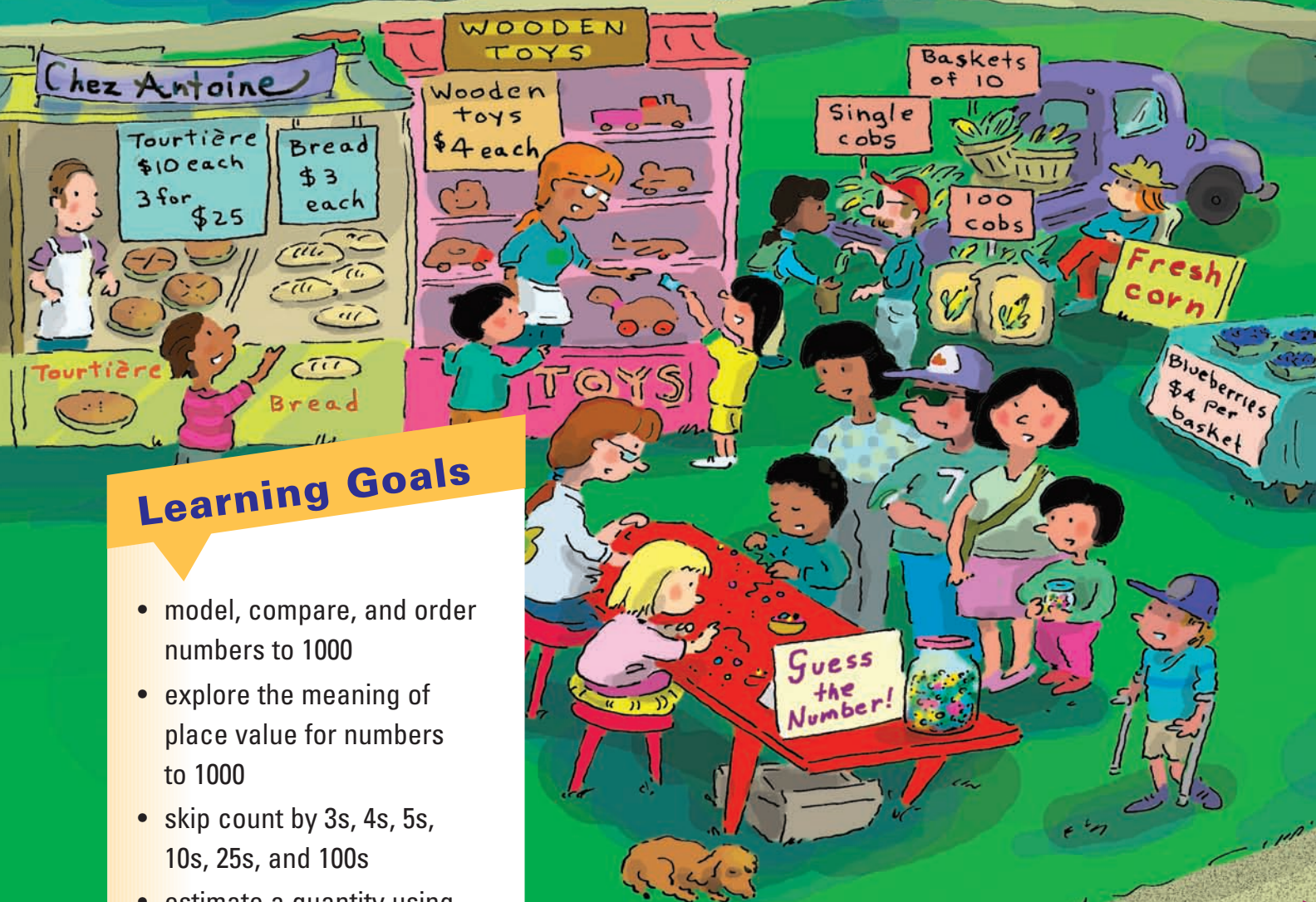## Learning Goals

- model, compare, and order numbers to 1000
- explore the meaning of place value for numbers to 1000
- skip count by 3s, 4s, 5s, 10s, 25s, and 100s
- estimate a quantity using a referent

1000

standard form

digit

place value

compare

order

number line

estimate

referent

thousand

Saturday morning at the market you will find vegetables and fruits fresh from the fields, bread and bannock to sample, and lots of fun things to make and do!

Hayride tickets

$3 - children
$5 - adults

Rides Today

364

Look at the picture.

• How are numbers used at the market?

• What is the greatest number you can find in the picture?

• What story can you tell about this number?

Counting Large Collections

101	102	103	104	105	106	107	108	109	110
111	112	113	114	115	116	117	118	119	120
121	122	123	124	125	126	127	128	129	130
131	132	133	134	135	136	137	138	139	140
141	142	143	144	145	146	147	148	149	150
151	152	153	154	155	156	157	158	159	160
161	162	163	164	165	166	167	168	169	170
171	172	173	174	175	176	177	178	179	180
181	182	183	184	185	186	187	188	189	190
191	192	193	194	195	196	197	198	199	200

Counting beyond 100 uses the same patterns as counting to 100.

Starting at one hundred eight,
108, 109, 110, 111, 112, 113, 114, …

Starting at one hundred forty-six,
146, 147, 148, 149, 150, 151, 152, …

What numbers come after 199?
After 209?

Explore

Choose a collection of objects.

Group the objects, then count them.
Find a different way to group the objects. Count again.
Record your work.

Show *and* Share

Show your collection to another group.
Explain how grouping helped you count the objects.
Discuss other ways you could group the objects.

Connect ···

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

➤ Count the straws.
There is one group of 100,
one group of 10, and three 1s.

First count the hundreds, then
count on the tens and the ones.

100,   110,   111,   112,   113
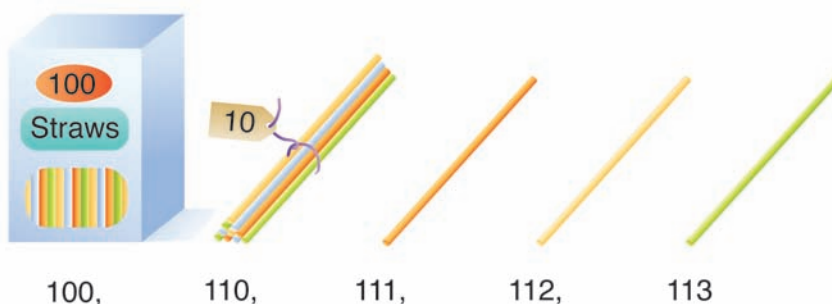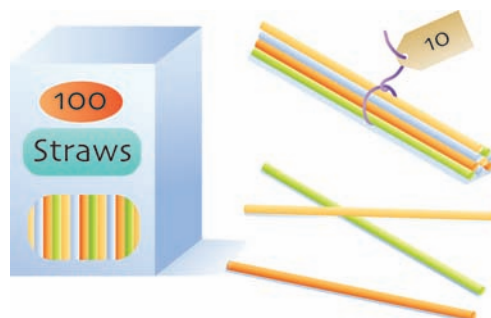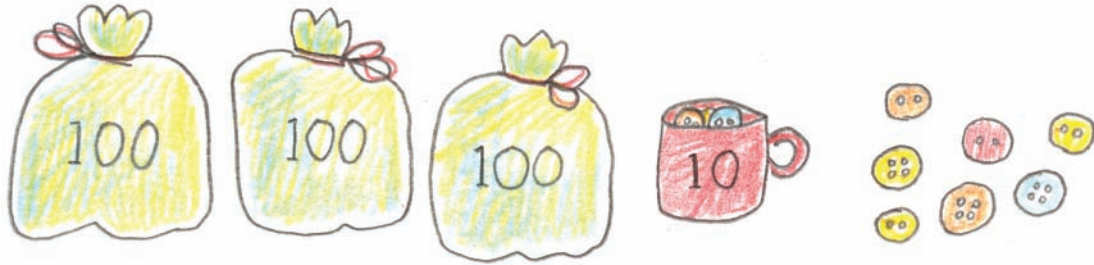
There are one hundred thirteen straws.

➤ Count the buttons.
There are 2 bags of 100 buttons, 3 cups of 10 buttons,
and 4 single buttons.

100,   200,   210,   220,   230,   231, 232, 233, 234

There are two hundred thirty-four buttons.

➤ Draw a collection of 317 buttons.

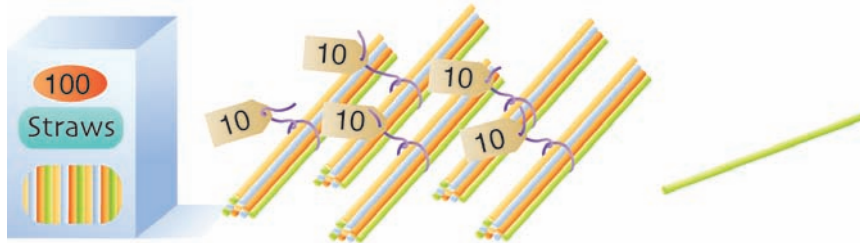Think: I need to draw 3 bags of 100 buttons, 1 cup of 10 buttons, and 7 single buttons.

Count to check: 100, 200, 300, 310, 311, 312, 313, 314, 315, 316, 317
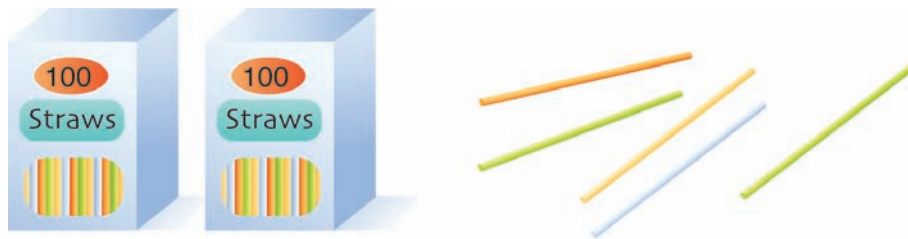
Practice

1. How many? Record your count.

   a)

   b)

2. Draw pictures to represent each number.
   Tell the number of hundreds, tens, and ones.
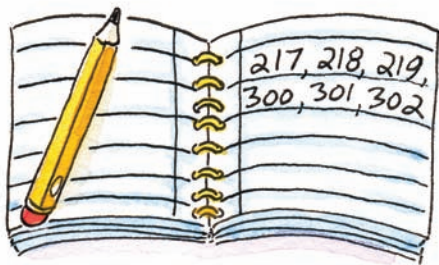   a) 139   b) 224   c) 120   d) 73

3. Why do we use groups of tens and hundreds to help count large collections?

4. Draw a collection of 333 objects.
Use your drawing to explain the meaning of each digit in the number 333.

5. Céline counted the pennies in her bank but she knows she isn't right.
Find her mistake and correct the count.

217, 218, 219,
300, 301, 302

6. Copy the rows of this hundred chart.
Fill in the missing numbers.

101	102	103	104	105				109	
	112	113			116	117	118		
		123	124	125	126	127	128		

7. Michael filled in this row of a hundred chart.
Find the mistakes he made.
What numbers belong in those spaces?

| 251 | 252 | 253 | 254 | 255 | 265 | 257 | 258 | 259 | 270 |

Reflect

Explain one way to make counting large collections easier.

At Home

Find a large collection. Count how many objects are in the collection.
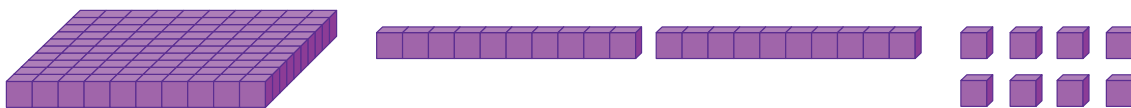
Modelling 3-Digit Numbers

A farmer harvests 128 ears of corn.

You can use pictures to show this number.

You can use Base Ten Blocks to model this number.

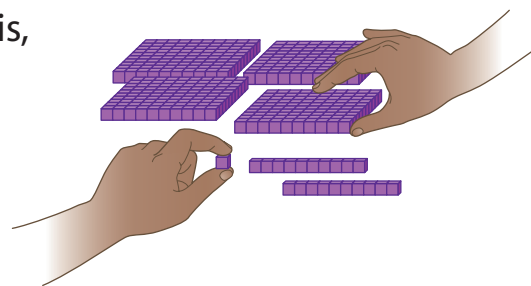You can use a place-value chart to show this number.

Hundreds	Tens	Ones
1	2	8

Explore

You will need Base Ten Blocks and a place-value chart.

➤ Choose a secret number between 100 and 1000.
Model it with Base Ten Blocks.

➤ Have your partner tell what the number is, and write it in a place-value chart.
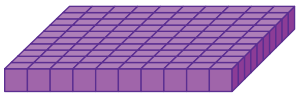
➤ Switch roles.
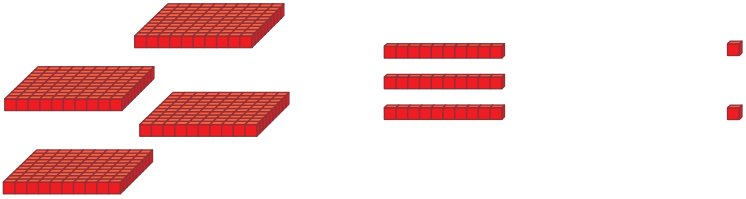Repeat this activity 5 times.

Show and Share

Tell your partner how you knew what to write in the place-value chart.

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 432.

4 hundreds   3 tens   2 ones

Hundreds	Tens	Ones
4	3	2

The value of this digit is 4 hundreds, or 400.

The value of this digit is 3 tens, or 30.

The value of this digit is 2 ones, or 2.

We can think of 432 as 400 + 30 + 2.
The base-ten name is 4 hundreds 3 tens 2 ones.
In words: four hundred thirty-two

Here is a way to show 205.

The 0 in 205 tells we can model the number using no tens.

Hundreds	Tens	Ones
2	0	5

The base-ten name is 2 hundreds 5 ones.
In words: two hundred five

1. Use a place-value chart to show each number. Write the number.

a)

b)

2. Draw a picture to show each number.
a) 417   **b)** 540   **c)** 966   **d)** 795   **e)** 128   **f)** 702

3. Write the base-ten name for each number.
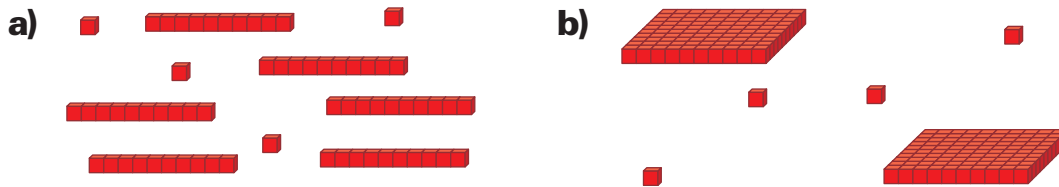**a)** 582   **b)** 414   **c)** 690   **d)** 308   **e)** 500   **f)** 987

4. Write the number for each base-ten name.
a) 9 hundreds 6 tens 2 ones   **b)** 7 hundreds 8 tens
c) 5 hundreds 7 ones   **d)** 8 hundreds 8 tens 8 ones

5. Give the value of each underlined digit.
a) 8<u>5</u>4   **b)** <u>7</u>15   **c)** 10<u>9</u>   **d)** <u>5</u>26
e) 7<u>0</u>8   **f)** 33<u>9</u>   **g)** 35<u>0</u>   **h)** 6<u>8</u>8

6. a) How many ones make 1 ten?
   b) How many tens make 1 hundred?
   c) How many hundreds make 1 thousand?
   d) What pattern do you see?
   e) How many thousands make 10 000? Explain.

7. Draw Base Ten Blocks to show each answer.
   a) Which number is 10 more than 167?
   b) Which number is 3 less than 348?
   c) Which number is 200 more than 203?

OKAY...
167,...

Reflect

How does the value of each digit in 747
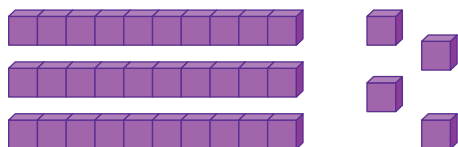depend on its place in the number?
Use words, pictures, or numbers to explain.
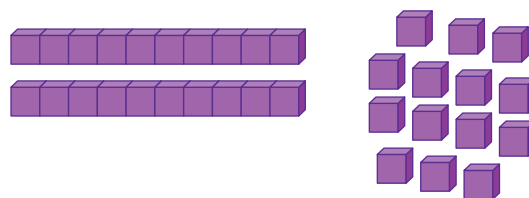
3 Showing Numbers in Many Ways

Sam and Jamie use Base Ten Blocks
to model the number 34.

Sam: 3 tens 4 ones   Jamie: 2 tens 14 ones

What other ways can you model 34 with Base Ten Blocks?

Explore

You will need Base Ten Blocks, a pencil, and paper.

➤ Show 236 in 3 different ways with Base Ten Blocks.
   Record each way.
   Use pictures, words, and numbers.

Show and Share

Talk about the different ways you modelled the number.

Connect

Here are different ways to show 208.
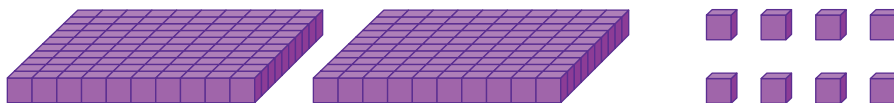When you use digits, the number is written in **standard form:** 208

Picture:

Base-ten name: 2 hundreds 8 ones

Place-value chart:

Hundreds	Tens	Ones
2	0	8

Base Ten Blocks:

You can also show 208 as
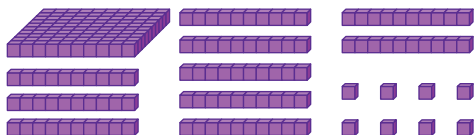
or as

1 hundred 10 tens 8 ones   1 hundred 9 tens 18 ones
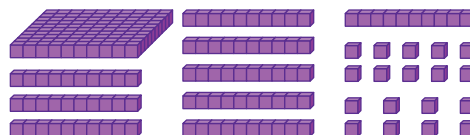
Practice

Use Base Ten Blocks when they help.

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

a)

b) 862   **c)** 501   **d)** twenty-seven

2. Write each number in standard form.

a)   **b)**
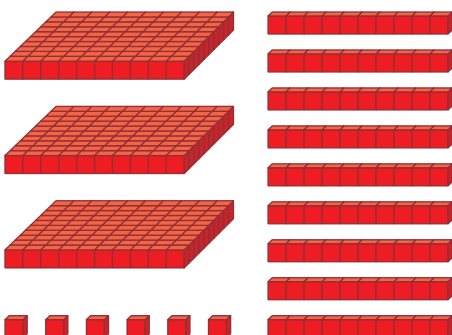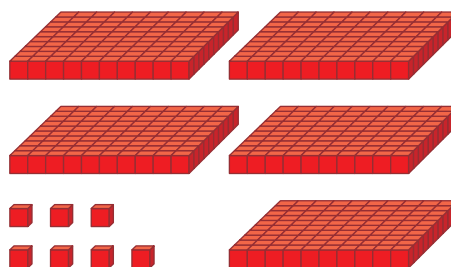
c) sixty-seven   **d)** 6 hundreds 8 tens
e) ninety-four   **f)** 3 hundreds 4 tens 5 ones

3. Draw Base Ten Blocks to show each number using the fewest blocks. Write each number in standard form.

a)

b)
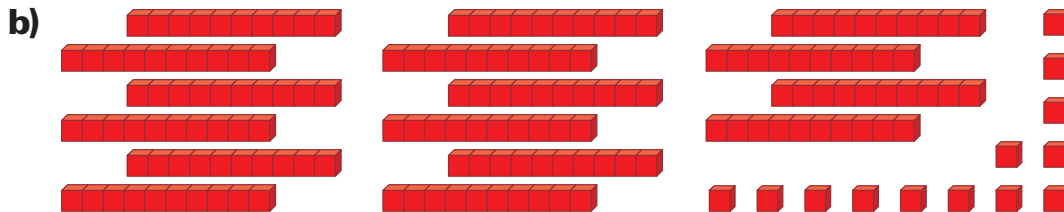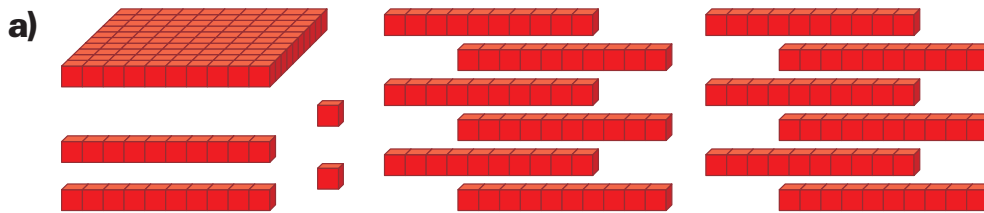
4. Show each number in 3 different ways.
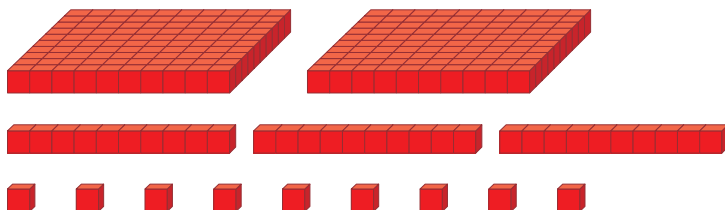   **a)** 286   **b)** 309   **c)** 529
   Compare your ways with those of your classmates.
   What do you notice?

5. Draw Base Ten Blocks to show each number in 3 different ways.
   a) 61   **b)** 315   **c)** 406

6. What does the zero in 308 mean?

7. Draw Base Ten Blocks.
   Show 267 using exactly 24 blocks.
   Explain how you did it.
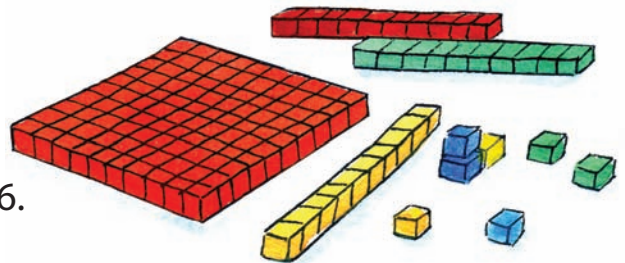
8. Ellen says that there are 53 tens in 536.
   Do you agree? Explain your thinking.

Reflect

How do you know that both pictures show 241? Use words, numbers, or pictures to explain.
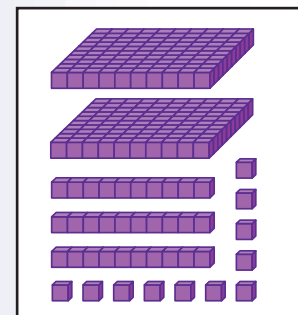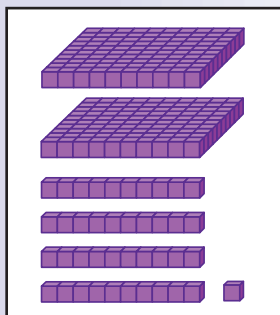
Explore

How many 3-digit numbers can you build using any 4 of these blocks for each number?

Show your work.
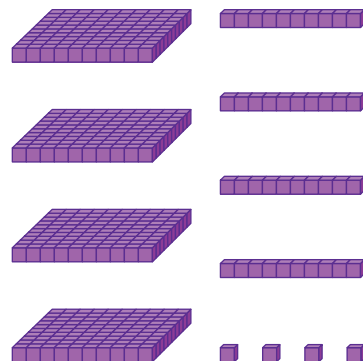
Show *and* Share

Show your classmates how you made the numbers.

Connect

How many 3-digit numbers can you build using any 3 of these blocks for each number?

Strategies
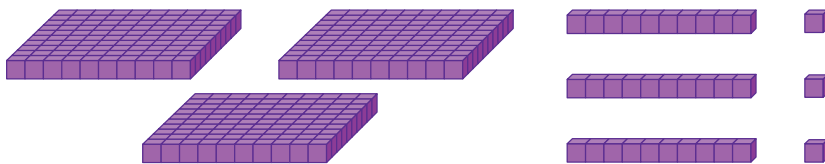
- **Make a table.**
- **Use a model.**
- **Draw a picture.**
- **Solve a simpler problem.**
- **Work backward.**
- **Guess and test.**
- **Make an organized list.**
- **Use a pattern.**

Understand
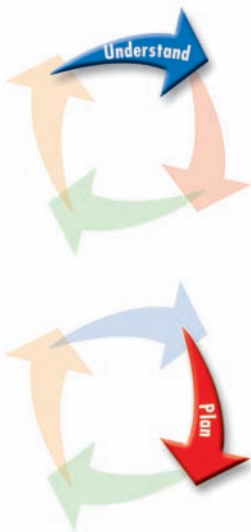
What do you know?
- You have to build as many 3-digit numbers as you can.
- You may use only 3 blocks to build each number.

Plan

Think of a strategy to help you solve the problem.
- You can **make an organized list**.
- List all the numbers with 3 hundreds, then 2 hundreds, then 1 hundred.
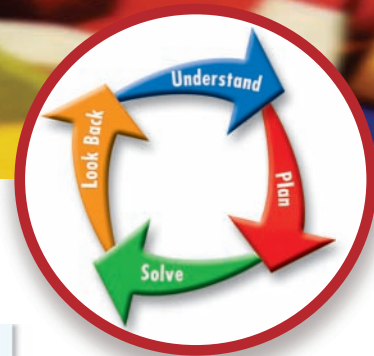
Make a chart to record your list.

Hundreds	Tens	Ones	Number

- Start with 3 hundreds.
  How many numbers can you build?
  Record this in the chart.
- Repeat with 2 hundreds, then 1 hundred.

How do you know you have found all the numbers?
What other way could you solve the problem?

Practice

Choose one of the

Strategies

1. Use any number of these blocks to make as many numbers as you can.

2. Roll a number cube 3 times.
   Use the numbers rolled to make as many 3-digit numbers as you can.

3. Balloons come in packages of 10, 25, and 50.
   You need 150 balloons.
   Find 5 ways you could buy the balloons.
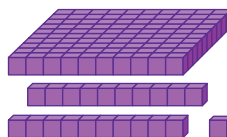
Reflect

Choose a *Practice* question.
How did you make an organized list to solve the problem?
Use words, pictures, or numbers to explain.

Comparing and Ordering Numbers

5

Explore

Who Has the Greatest Number?

You will need a game board for each player and 4 sets of cards numbered 0 to 9. Shuffle the cards and place them face down.

➤ Each player makes a 3-digit number. Follow these steps.
  • Turn over the top card to show a number.
    Write the number in a blank space in the top row of your game board.
  • Turn over a second and third number.
➤ Players read out the 3-digit numbers they have made.
➤ The player with the greatest number gets 1 point.
  If 2 or more players have the same number, each player gets a point.
➤ Move to the next row of your game board.

Play until one of you reaches 5 points.

Play the game again.
This time, try to make the least number.

Show and Share

Show how you decided where to put each number on your game board.
How did your strategy help you reach the greatest number?
The least number?

Connect ∙∙∙

➤ You can use place value to **compare** numbers.

To compare 472 and 476:

1. Compare the hundreds digits.	2. Compare the tens digits.	3. Compare the ones digits.
4 72	4 7 2	47 2
4 76	4 7 6	47 6
Both have 4 hundreds, or 400.	Both have 7 tens, or 70.	2 ones are less than 6 ones.

Since 2 is less than 6,
then 472 is *less than* 476   and   476 is *greater than* 472.

You can write this as:

$$472 < 476 \qquad \text{and} \qquad 476 > 472$$

This symbol means "less than."

This symbol means "greater than."

➤ You can also use place value to **order** numbers.
To order 574, 384, and 578, compare each digit.

Hundreds	Tens	Ones
5	7	4
3	8	4
5	7	8

384 has the fewest hundreds, so it is the least number.
578 and 574 have the same numbers of hundreds and tens.
574 has fewer ones than 578.
So, $574 < 578$.

The order from least to greatest is 384, 574, 578.
The order from greatest to least is 578, 574, 384.

1. Which book has the greater number of stickers?
   How do you know?
   a)

   b)

2. Copy each pair of numbers.
   Use > or < to make a true statement.
   a) 335 ☐ 281   b) 435 ☐ 462
   c) 705 ☐ 709   d) 162 ☐ 94

3. Copy each statement.
   Write a number to make each statement true.
   a) 710 > ☐   b) 984 < ☐
   c) 630 > ☐   d) ☐ < 720
   e) ☐ < 391   f) ☐ > 99

4. The number of dinosaurs in each box has 3 digits:
   2, 5, and 6.
   The blue box has fewer dinosaurs
   than the green box.
   How many dinosaurs could there be
   in each box?
   How do you know?
   Show your work.

5. Which is the least number? How do you know?

a)	b)	c)	d)
968	215	158	528
79	296	96	514
841	207	91	404
324	233	382	671

6. These numbers should be in order from least to greatest.
Find the errors. Write the numbers in the correct order.

a) 43, 430, 417, 741   **b)** 296, 207, 215, 233

c) 404, 541, 514, 528   **d)** 96, 91, 158, 149

7. Order the numbers from least to greatest.

a) 625, 431, 662, 523

b) 121, 99, 496, 407

8. Order the numbers from greatest to least.

a) 510, 961, 847, 941

b) 865, 502, 969, 45

9. Write a number between 576 and 841.
How do you know your number fits?

10. How many different 3-digit numbers can you write
with the digits 3, 4, 7?
Order the numbers from greatest to least.
How can you tell if you have found all possible numbers?

11. Look at the numbers 263 and 460.
How many digits do you need to compare
to find which number is greater? Explain.

Math Link

History

Around 1900 BCE, the Babylonians counted by 60s
because there are 60 minutes in 1 hour.

Around 700 CE, the Hindus in India were counting by 10s
and using the numerals we use today.
Why do you think we count by 10s?

Reflect

Choose 3 different numbers between 100 and 500.
Explain how to order the numbers.

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

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

130, 125, 120, ...

110   115   120   125   130
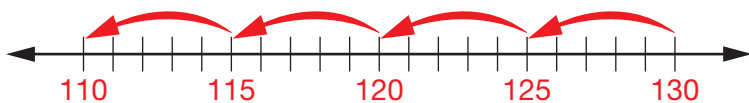
Start at 130. Count back by 5s.

Explore

You will need a copy of blank number lines.

➤ Choose a starting number. Label it on a number line.

➤ Count on by 5s or 10s.
Record your count on the number line.

➤ Choose a different starting number. Label it.

➤ Count back by 5s or 10s. Record your count.

➤ Try different starting numbers.

Show and Share

Trade number lines with another pair of students.
Check each other's work.
Share the patterns that you see.

Connect
....

➤ To count on by 10s, start anywhere.

143   153   163   173   183
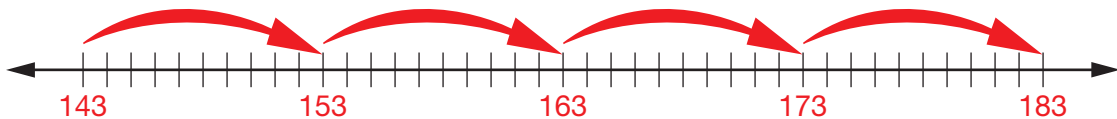
Note the pattern in the ones digits: 3, 3, 3, 3, 3, …
Think about how this would look on a hundred chart.

141	142	143	144	145	146	147	148	149	150
151	152	153	154	155	156	157	158	159	160
161	162	163	164	165	166	167	168	169	170
171	172	173	174	175	176	177	178	179	180
181	182	183	184	185	186	187	188	189	190

➤ To count back by 5s, start anywhere.

232   237   242   247   252   257
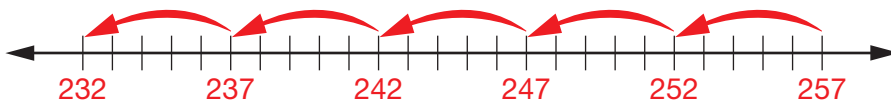
Note the pattern in the ones digits: 7, 2, 7, 2, 7, 2, …
Think about how this would look on a hundred chart.

231	232	233	234	235	236	237	238	239	240
241	242	243	244	245	246	247	248	249	250
251	252	253	254	255	256	257	258	259	260

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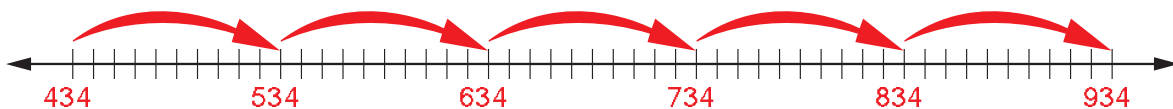

434 534 634 734 834 934

Only the hundreds digit is changing.
It is increasing by 1 each time: 4, 5, 6, 7, 8, 9.

➤ We can also count on or back by 25s.
Start at a number that ends in 25, 50, 75, or 00.

801	802	803	804	805	806	807	808	809	810
811	812	813	814	815	816	817	818	819	820
821	822	823	824	825	826	827	828	829	830
831	832	833	834	835	836	837	838	839	840
841	842	843	844	845	846	847	848	849	850
851	852	853	854	855	856	857	858	859	860
861	862	863	864	865	866	867	868	869	870
871	872	873	874	875	876	877	878	879	880
881	882	883	884	885	886	887	888	889	890
891	892	893	894	895	896	897	898	899	900

901	902	903	904	905	906	907	908	909	910
911	912	913	914	915	916	917	918	919	920
921	922	923	924	925	926	927	928	929	930
931	932	933	934	935	936	937	938	939	940
941	942	943	944	945	946	947	948	949	950
951	952	953	954	955	956	957	958	959	960
961	962	963	964	965	966	967	968	969	970
971	972	973	974	975	976	977	978	979	980
981	982	983	984	985	986	987	988	989	990
991	992	993	994	995	996	997	998	999	1000

Start at 825. Count on:
825, 850, 875, 900, 925, 950, 975, 1000
Note the pattern in the last 2 digits:
25, 50, 75, 00, 25, 50, …

Start at 950. Count back:
950, 925, 900, 875, 850, 825, …
Note the pattern in the last 2 digits:
50, 25, 00, 75, 50, 25, …

Can you continue my pattern?
825, 725, 625, …

1. Use number lines.
   a) Start at 129. Count on by 5s to 169.
   b) Start at 421. Count back by 10s to 321.
   c) Start at 200. Count on by 25s to 350.
   d) Start at 887. Count back by 100s to 287.

For questions 2, 3, and 4, use number lines or hundred charts.

2. Start with each number.
   Count by 5s, 10s, or 100s.
   Describe your pattern.
   a) 375   b) 812   c) 199

3. Copy each pattern. Fill in the missing numbers.
   a) □, 261, 361, 461, □   b) □, 758, 748, 738, □
   c) □, 434, 429, 424, □   d) □, 525, 550, 575, □

4. Find the mistakes in the patterns.
   Rewrite the patterns correctly.
   a) 369, 469, 669, 769   b) 876, 871, 866, 851
   c) 375, 350, 327, 300   d) 519, 509, 419, 409

5. Philippe started at 625 on
   a number line and counted on.
   He stopped at 725.
   What might his number pattern be?
   Find at least 2 ways he could
   have made the pattern.
   Show your work.

Reflect

Show a number pattern of your own on a number line.
Describe the pattern.

Skip Counting with Coins

A loonie is worth one dollar.
One dollar is also 100 cents.

The coin is named after the loon, a bird
that lives in many parts of Canada.

The yellow-billed loon is
a graceful swimmer.
It dives for fish in the
Arctic wetlands.

Explore

Choose a bag of coins.
Count how much money
you have.
Record your work.

How many ways can
you find to count the money?
Use pictures, numbers,
or words to show how
you counted.

Show *and* Share

Share your counting strategies with another pair of students.
Show them all the ways you used to count.

Connect ·

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

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

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

The quarters are worth
one hundred seventy-five cents.
One hundred cents is one dollar.
So, we say one dollar and
seventy-five cents.

> When we have more than
> 100 cents, we can say the
> amount in dollars and cents.

➤ Each dime is worth 10 cents. Count by 10s.

10,   20,   30,   40,   50,   60,

70,   80,   90,   100,   110,   120

The dimes are worth one hundred twenty cents.
We say one dollar and twenty cents.

Ten dimes are one dollar. So, we could also arrange the dimes like this.

one dollar

one dollar and ten cents

one dollar and twenty cents
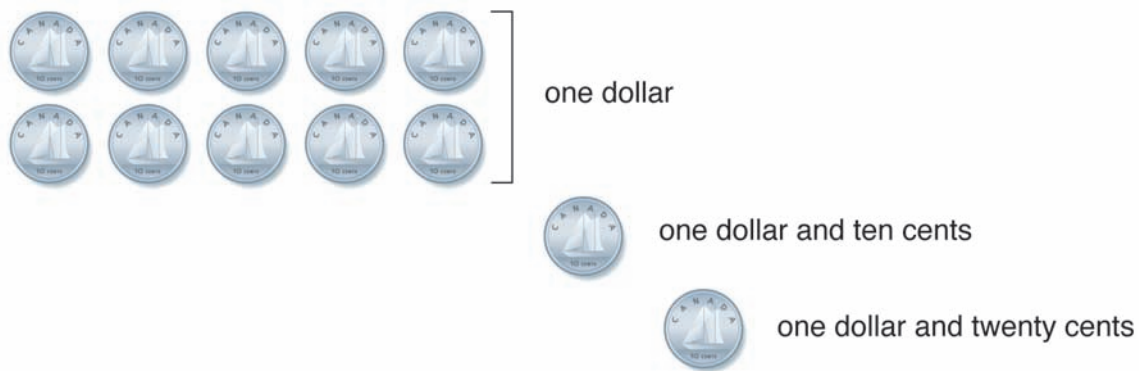
The dimes are worth one dollar and twenty cents.

Practice

1. Draw nickels to show one dollar and five cents.

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

   a)

   b)

   c)

   d)

3. How much money is in each picture?

a)

b)

c)

4. Krista counted the nickels from her bank.
Is her count correct? If not, find her mistake
and correct it.

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

5. David has one dollar in his pocket.
All his coins are the same.
What coins could he have?
How many solutions can you find?
How can you tell if you have found all the solutions?

Reflect

How much are twenty nickels worth?
Use pictures, words, or numbers to show your work.

Representing Numbers with Coins

Rajit has pennies, dimes, and loonies to count.

How much money does Rajit have?

Explore

You will need a tub of loonies, dimes, and pennies.
Find at least 3 ways to make two dollars.
Use pictures, numbers, or words to record the ways you find.

Show *and* Share

Share your work with another pair of students. What other ways can you find to make two dollars?

LESSON FOCUS | Represent numbers in more than one way using coins.

There are many different ways to make four dollars and fifty-two cents.

I used 4 loonies, 5 dimes, and 2 pennies.

I used 3 loonies, 15 dimes, and 2 pennies.

I used 4 loonies, 4 dimes, and 12 pennies.

1. How much money is shown in each picture?

   a)

   b)

   c)

   d)

2. Justine has two dollars and fifty cents in her pocket.
   She only has dimes, pennies, and loonies.
   What coins could she have?
   Find at least 3 solutions.

3. Use loonies, dimes, and pennies.
   Show three dollars and forty-two cents.
   Show it in as many different ways as you can.
   Use numbers, words, or pictures to show each way.

4. a) How many pennies make three dollars?
   b) How many dimes make three dollars?
   c) How many loonies make three dollars?
   Use pictures, numbers, or words to explain your thinking.

Reflect

How is using coins to represent numbers the same as using
Base Ten Blocks? How is it different?

Counting by 3s and 4s

Some things come in threes or fours.

3 Balls for $1

4 Cars for $5
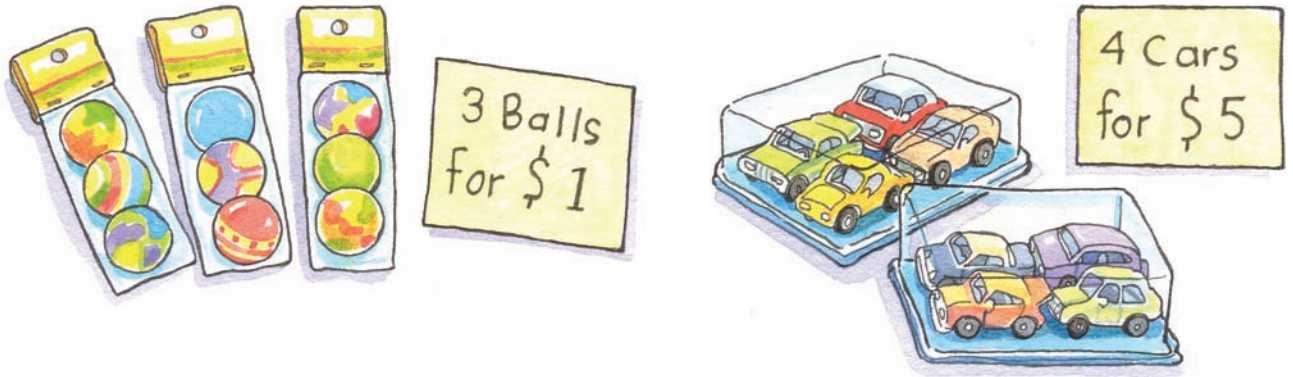
How many balls are there? How many cars?

Explore

You will need copies of these charts.

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

101	102	103	104	105	106	107	108	109	110
111	112	113	114	115	116	117	118	119	120
121	122	123	124	125	126	127	128	129	130
131	132	133	134	135	136	137	138	139	140
141	142	143	144	145	146	147	148	149	150
151	152	153	154	155	156	157	158	159	160
161	162	163	164	165	166	167	168	169	170
171	172	173	174	175	176	177	178	179	180
181	182	183	184	185	186	187	188	189	190
191	192	193	194	195	196	197	198	199	200

Continue counting on by 3s. Colour the squares as you go.
What pattern can you find in the charts?
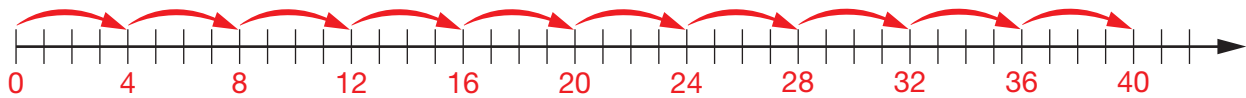Record the numbers for counting by 3s.

Show *and* Share

Show your charts to a classmate.
How are your patterns the same? How are they different?
Predict the pattern for 201 to 300.

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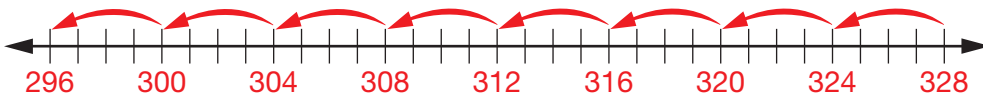
To count on by 4s, say every fourth number.

Start at 4. Count on by 4s:

 4, 8, 12, 16, 20, 24, 28, ...

Note the pattern in the ones digits:

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

Now start at 328.

Count back by 4s:

 328, 324, 320, 316, 312, 308, 304, 300, 296, ...

Note the pattern in the ones digits:

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

Practice

1. Copy each pattern and fill in the missing number.
   Describe the patterns.
   a) 9, 12, ☐, 18
   b) 44, 48, ☐, 56, ☐
   c) 108, 104, ☐, ☐, 92
   d) 387, ☐, 381, ☐, ☐

2. Use a blank number line.
   a) Start at 252. Count on by 3s to 270.
   b) Start at 69. Count back by 3s to 48.
   c) Start at 606. Count back by 3s to 582.

3. Use a blank number line.
   a) Start at 612. Count on by 4s to 640.
   b) Start at 172. Count back by 4s to 140.
   c) Start at 820. Count back by 4s to 792.

4. Find the mistakes in each pattern.
   Rewrite the patterns correctly.
   Describe each pattern.
   a) 186, 189, 192, 194
   b) 306, 303, 299, 297
   c) 532, 536, 540, 543
   d) 400, 396, 390, 386

5. Start at 300.
   Count on or back by 3s or 4s.
   Show your pattern on a number line
   or a hundred chart. Describe the pattern.
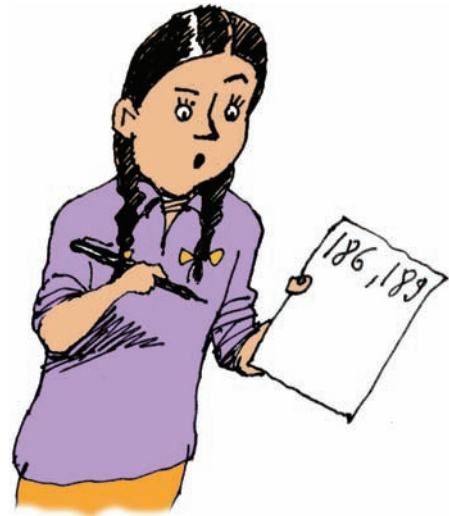
6. Four rows of a hundred chart are shown.
   Describe the pattern of the shaded squares.
   What numbers should be shaded in the fourth row?
   How do you know?

701	702	703	704	705	706	707	708	709	710
711	712	713	714	715	716	717	718	719	720
721	722	723	724	725	726	727	728	729	730
731	732	733	734	735	736	737	738	739	740

Reflect

How is counting by 3s and 4s the same as counting by 2s or 5s?
How is it different?

Estimating to 1000

Danielle is trying to figure out how many buttons are in the jar. How might she do this?

Explore

Choose a bag of items.
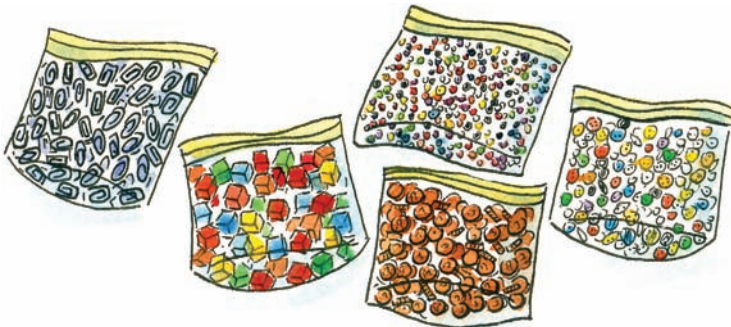
Think about a strategy you could use to **estimate** how many items are in the bag.
Work with your partner.
Make an estimate you can both agree on.
Record your estimate.

An estimate is a thoughtful guess that is close to the number you would have if you counted all the objects.

Show and Share

Share your strategy and estimate with another pair of students.
Count both collections.
Which estimate was closer?
Which strategy worked better?
Why do you think so?

➤ We can only see part of the sheet of paper.
Estimate how many buttons are on the whole piece of paper.

There are 10 buttons on the part we can see.
Knowing this helps us to estimate how many
buttons are on the whole paper.
This is called using 10 as a **referent**.

It looks like there is room for 3 groups
of 10 on the whole paper.
10 + 10 + 10 = 30
A thoughtful estimate is 30 buttons.

➤ Look at the 100-seed pile.
Estimate how many seeds are in the big pile.

100

?
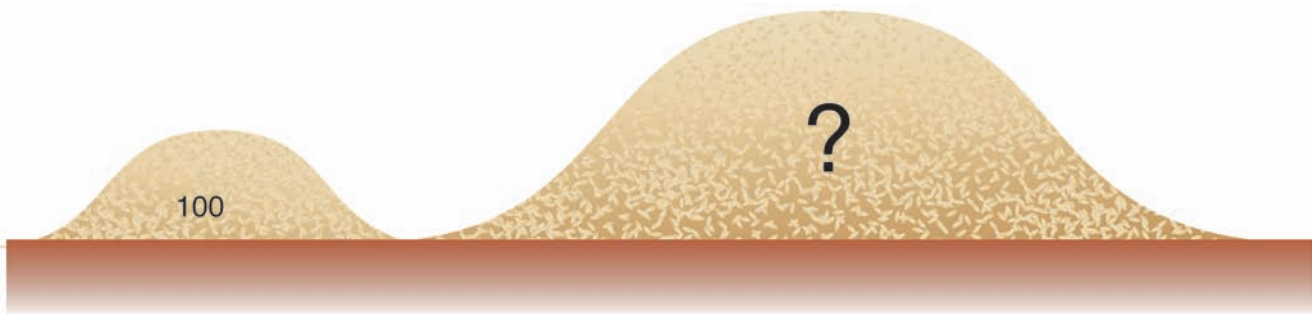
It looks like there is room for 4 groups of 100 seeds.
100 + 100 + 100 + 100 = 400
A thoughtful estimate is 400 seeds.
We used 100 as a referent to help make an estimate.

1. Estimate how many buttons are in the big pile.
How did you make your estimate?

10

2. Estimate how many beads are in the big bag.
How did you make your estimate?

100
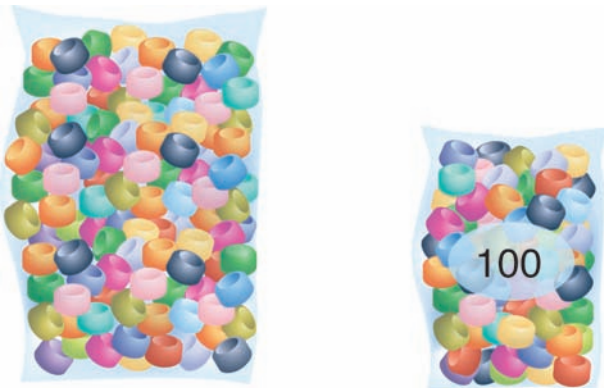
3. Choose the best estimate for the number of blocks in
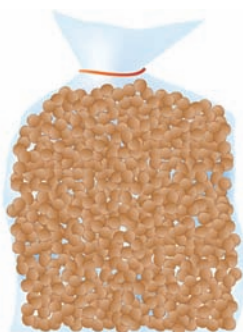the big pile: 313, 125, or 648.
Explain your choice.

100
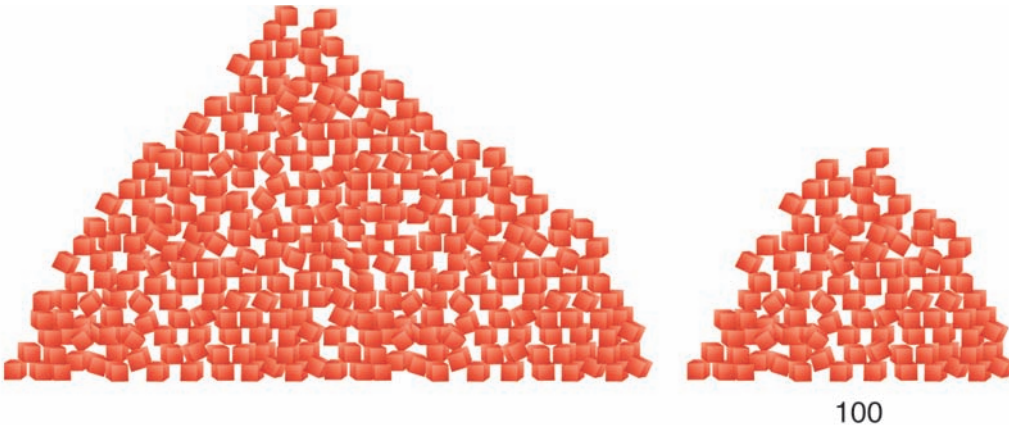
4. Do you agree or disagree with Sari's estimate? Explain your decision.
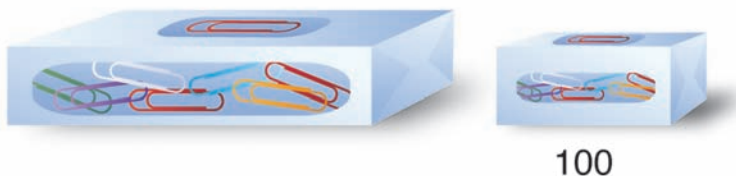
My estimate is 403 paper clips.

100

5. Which bag would be more helpful as a referent for estimating the number of pennies? Explain your choice.

6. René needs about 400 beads to complete his bookmark. How could he predict whether he has enough beads without counting all of them?

Reflect

Describe a strategy that you can use to help make a good estimate.

At Home

Look for a large collection of items. Count 10 and then make an estimate of the total number. Count 100 and make another estimate.

How Much Is 1000?

Scientists think that polar bears may be endangered because of thinning sea ice. Today, there are only about 1000 polar bears left in northeastern Manitoba.

Explore

You will need 100-grid squares and a large sheet of paper.
Arrange the 100-grid squares so their sides are touching.
Count by 100s as you add squares to your design.
Stop when you have 1000.
Glue the squares down to make a 1000 shape.

LESSON FOCUS | Represent 1000 using base-ten materials.
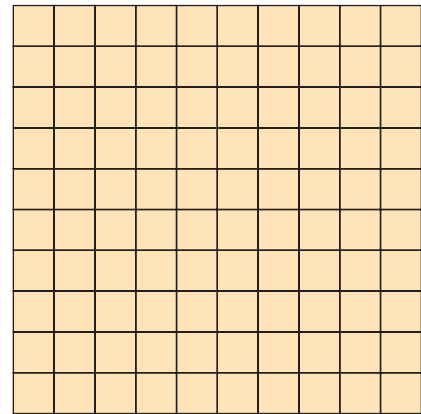
Show *and* Share

Share your work with another pair of students.
Check to see if you each have made a 1000 shape.
Explain why your work looks the same or different.
How many other 1000 shapes can you make?

Connect

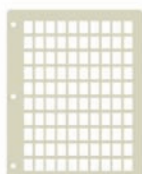Janny's stamp album has 10 pages.
Each page has 100 stamps.
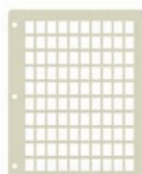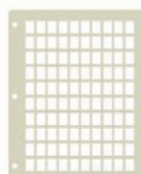
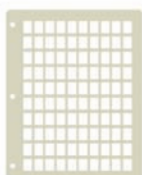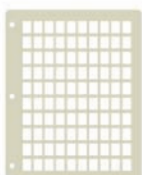How many stamps are in Janny's album?
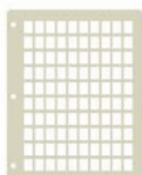
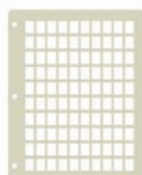Count by 100s:
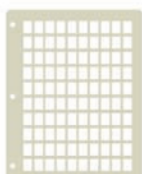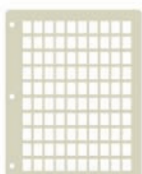
100   200   300   400   500

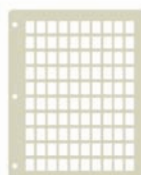600   700   800   900   1000

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

1. Are there more than 1000 or fewer than 1000:
   a) stars in the sky on a clear night?
   b) students in your school?
   c) names in a telephone book?
   d) names on a page in a telephone book?
   e) footsteps to the principal's office?

2. Are there more than 1000 or fewer than 1000 blades of grass on a lawn? How could you find out?

3. When is 1000 a big number? Explain.

4. When is 1000 a small number? Explain.

5. How could you use Base Ten Blocks to show 1000? Explain.

Reflect

When would you like to have 1000 of something? Not like to have 1000 of something? Write about your ideas.

Race to 1000

Play with up to 4 players.
You will need Base Ten Blocks and a 0 to 9 spinner.

➤ Place the Base Ten Blocks in a pile where all players
   can reach them.
➤ Decide who will go first.
➤ Players take turns spinning.
   On your turn, collect the number of tens shown
   on the spinner from the pile of Base Ten Blocks.
➤ When you can, make a trade for a hundred flat or
   a thousand block. Trades can only be made after
   you draw your tens from the pile and before the
   next player spins.
➤ The first player who can trade for a thousand block wins.

Show What You Know

LESSON

1

1. Show the count to find out how many.
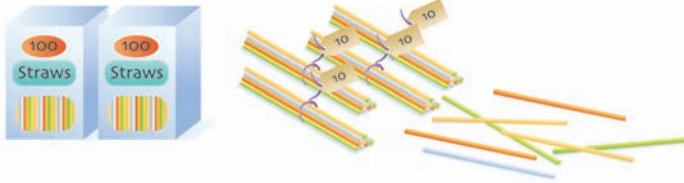
2. Three rows of a hundred chart
are shown. Copy the rows.
Fill in the missing numbers.

491	492	493				497	498	499	
	502	503	504	505	506	507			
	512			515	516		518		520

2

3. Write the base-ten name for each number.
 a) 142   **b)** 891   **c)** 306   **d)** 528   **e)** 290

4. Explain the value of each digit in the number 444.
Use pictures, numbers, or words.

3

5. Use Base Ten Blocks to show each number 3 different ways.
Draw a picture to show each way.
 a) 154   **b)** 316   **c)** 605

5

6. Use the digits 6, 3, and 9.
 a) Make as many 3-digit numbers as you can.
 b) Order the numbers you made.
 c) Which number is the greatest? The least?

6
9

7. Use a number line.
 a) Start at 27. Count on by 5s to 62.
 b) Start at 899. Count back by 10s to 819.
 c) Start at 325. Count on by 25s to 475.
 d) Start at 220. Count on by 4s to 248.
 e) Start at 180. Count back by 3s to 150.

8. Copy each pattern. Fill in the missing numbers.
 a) ☐, 75, 100, 125, ☐   **b)** ☐, 388, 378, 368, ☐
 c) ☐, 114, 119, 124, ☐   **d)** ☐, 609, 606, 603, ☐

7

9. How much money is in each picture?
Record your answers in words.

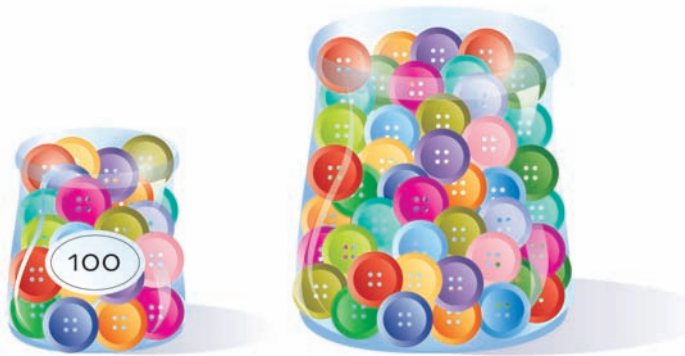**a)**

b)

8

10. Tanya has three dollars and fifty-seven cents.
She has only dimes, pennies, and loonies.
What coins could she have?

10

11. Choose the best estimate for the number of buttons
in the big jar: 415, 200, or 728. Explain your choice.

11

12. Are there more or fewer than 1000:
   a) people in a movie theatre?
   b) hairs on a person's head?
   c) pails of water in a lake?
Explain your thinking.

UNIT

2 Learning Goals

☑ model, compare, and order numbers to 1000
☑ explore the meaning of place value for numbers to 1000
☑ skip count by 3s, 4s, 5s, 10s, 25s, and 100s
☑ estimate a quantity using a referent

The Market

There are all kinds of exciting things to do at the market.
Many of them involve number problems.

Part 1

➤ Elisapie bought 7 wooden toys for four dollars each.
Find how much they cost.

➤ Alasie used her 100 beads as a referent to guess
the number of beads in the jar.
Do you think her guess was 487, 226, or 874? Why?

➤ Pat bought 265 cobs of corn in bags, baskets, and singles.
Show 3 ways she could have bought the corn.

➤ Justin bought a loaf of bread for three dollars.
Show 3 different ways he could have paid for the bread.

Part 2

➤ Write a story problem about the market.

➤ Solve your problem.

➤ Trade problems with a partner.
Which problem was harder to solve for you?
Why?

Part 3

➤ Suppose you were at the market.
What booth would you set up?

➤ How would you use numbers
in your booth?
Use pictures, words, and
numbers to show
your ideas.

Reflect on Your Learning

Write 3 things you learned about numbers in this unit.
Use pictures, words, and numbers to explain.