

Grouping Measurement Units

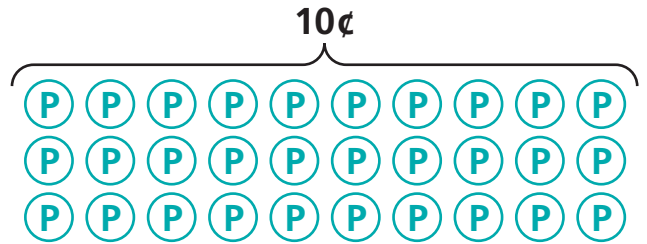
NCTM Standards 1, 4, 6, 7, 10

Write the missing amount. Shade the picture if you want.

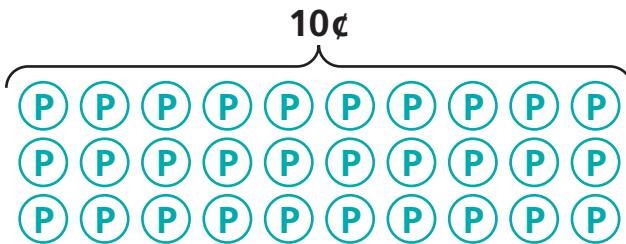
1 2 weeks, 3 days = days

SUN	MON	TUE	WED	THU	FRI	SAT

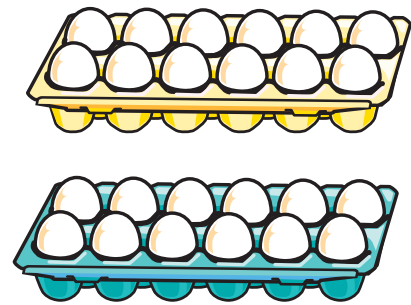
2 1 dime, 4 pennies = pennies



3 2 dimes, pennies = 28 pennies



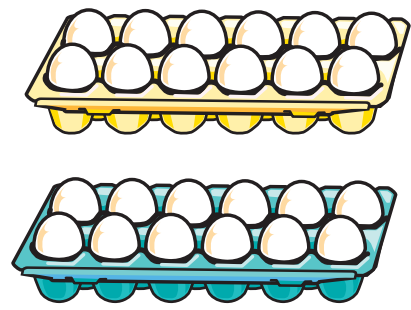
4 1 dozen, 2 eggs = eggs



5 weeks, days = 23 days

SUN	MON	TUE	WED	THU	FRI	SAT

6 dozen, eggs = 20 eggs



Use the fewest units to complete each row in the table.

7

Weeks	Days	Total days
1	0	7
1	4	
0	6	
2		14
1		12
	3	24
		22

8

Dimes	Pennies	Total pennies
1	4	
2		28
0	3	
	2	12
		8
		35
		61

9

Minutes	Seconds	Total seconds
0	20	
1	0	60
2	0	120
1		72
		67
	49	109
		135

10 Challenge

$\frac{1}{2}$ hour	Minutes	Total minutes
1	9	39
0	9	
1	0	
2	0	
		53
		71
		89

Adding and Subtracting Money

NCTM Standards 1, 6, 7, 9, 10

Complete the table using the fewest units.

1

Dimes	Nickels	Pennies	Total cents
		0	5
			9
1	1	0	
			33
5	1	4	
			45

2

Quarters	Nickels	Pennies	Total cents
			9
1	1	0	
			34
2	0	4	
1	3	2	
			79

3

Dollars	Dimes	Pennies	Total cents
0			16
0	5	8	
			87
1	2	4	
1		6	166
			214

4

Dollars	Quarters	Pennies	Total cents
0			29
			70
1	1	4	
	3	21	296
			163
			337

Use the fewest coins to complete the table.
You can use the table to find the missing sums.

5

Dimes	Nickels	Pennies	Total cents
			23
7			71
			87
			7
4	1	3	
			18
			32

6

$$\begin{array}{r} 23\text{¢} \\ + 71\text{¢} \\ \hline \square \text{¢} \end{array}$$

7

$$\begin{array}{r} 48\text{¢} \\ + 23\text{¢} \\ \hline \square \text{¢} \end{array}$$

8

$$\begin{array}{r} 32\text{¢} \\ + 18\text{¢} \\ \hline \square \text{¢} \end{array}$$

9 **Challenge** Keegan spent 1 week and 5 days with her aunt and then 2 weeks and 4 days with her grandfather. How long was Keegan away?

weeks, days

10 **Challenge** The large desk is 3 feet 4 inches wide. The doorway is only 2 feet 8 inches wide. How much wider is the desk than the doorway?

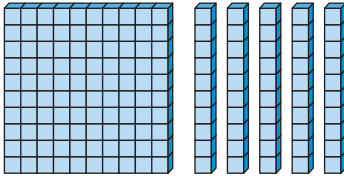
feet, inches

Regrouping with Base-Ten Blocks

NCTM Standards 1, 6, 7, 8, 9, 10

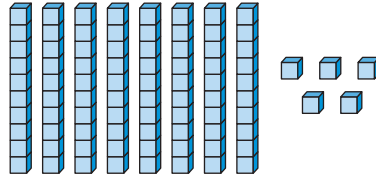
For each group of blocks, decide if it matches the number and if it uses the fewest blocks to match it.

1 85



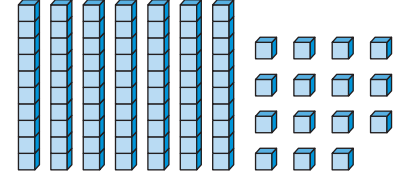
Matches? yes no

Matches
with fewest? yes **no**



Matches? yes no

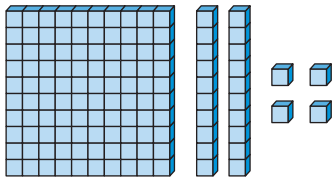
Matches
with fewest? yes no



Matches? **yes** no

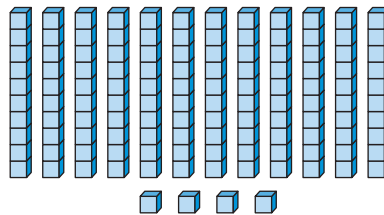
Matches
with fewest? yes **no**

2 124



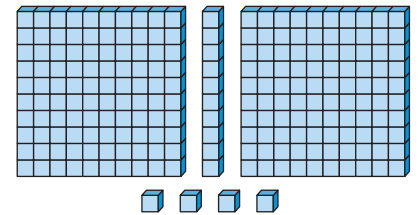
Matches? yes no

Matches
with fewest? yes no



Matches? yes no

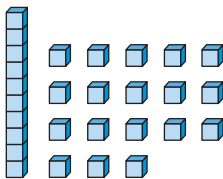
Matches
with fewest? yes no



Matches? yes no

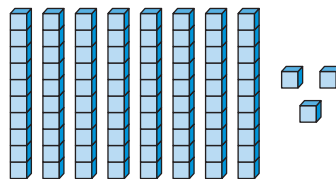
Matches
with fewest? yes no

3 38



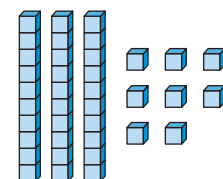
Matches? yes no

Matches
with fewest? yes no



Matches? yes no

Matches
with fewest? yes no

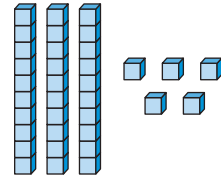


Matches? yes no

Matches
with fewest? yes no

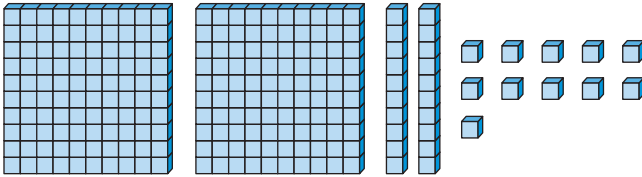
4 Write the number that matches the group of blocks.

number: rods, units



Answer the questions about this group of blocks.

231



5 How do you know this group of blocks does NOT use the fewest blocks?



6 What group of blocks uses the fewest blocks to show 231?

7 Challenge Omar started with 1 dollar, 8 dimes, and 3 pennies. Then he earned 1 quarter for doing a chore. How much money does Omar have? How can he write this amount using the fewest dollars, dimes, and pennies?

dollars, dimes, pennies

Mystery Number Puzzles

NCTM Standards 1, 2, 6, 7, 8, 9, 10

“Have fun,” said Mrs. Jackson.

“All these puzzles are about two-digit numbers.”

1 A I am greater than 24×4 .

B $u < t$ (My units digit is less than my tens digit.)

C I am odd.

2 A $t = u$

B I am not an even number.

C I am a multiple of 5.

3 A I am less than 4×4 .

B I am a multiple of 5.

C I am even.

4 A I am less than 6×4 .

B I am greater than 7×3 .

C $u > t$

You can use this space to make your lists.

1

2

3

4



5 One of the clues above says, “I am a multiple of 5.” What does this clue tell about the units (ones) digit of the mystery number?

Some of these mystery numbers have 3 digits.

6 **A** I can be represented by 6 base-ten blocks.

B $t < u$

C I am even.

7 **A** I am greater than 10×12 .

B I am a multiple of 25.

C $h < t < u$

8 **A** I am less than 13×12 .

B $t = u$

C $h > t$

9 **Challenge**

A I am less than 20×20 .

B I am a square number.

C $u < t$

D $h = u$

You can use this space to make your lists.

6

7

8

9

Focusing on Digits

NCTM Standards 1, 2, 6, 7, 9, 10

Write the two-digit mystery number for each puzzle at the bottom of the page.

- 1 A Both my digits are odd.
 B I am less than 5×7 .
 C $u < t$

- 2 A I am greater than 7×9 .
 B Both my digits are odd.
 C I can be made with 8 base-ten blocks.

- 3 A t is even.
 B I am a multiple of 10.
 C I am less than 7×4 .

- 4 A I am between 7×5 and 7×7 .
 B I am a multiple of 5.
 C $u < t$

1

t	u
	0
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9

2

t	u
	0
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9

3

t	u
	0
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9

4

t	u
	0
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9

Write the mystery number for each puzzle at the bottom of the page.

5 **A** I am less than 100.

B I am odd.

C I am a multiple of 11.

D The sum of my digits is 10.

6 **A** I am less than 10×10 .

B I am even.

C The product of my digits is 42.

7 **A** I am between 12×12 and 17×10 .

B $u > t$

C I can only be made with more than 14 base-ten blocks

D $t + 2 = u$

8 Challenge

A I am between 10×10 and 20×20 .

B $h = u \times 3$

C I am a square number.

D $t = h \times 2$

5 *t* *u*

--	--

- | | |
|---|---|
| | 0 |
| 1 | 1 |
| 2 | 2 |
| 3 | 3 |
| 4 | 4 |
| 5 | 5 |
| 6 | 6 |
| 7 | 7 |
| 8 | 8 |
| 9 | 9 |

6 *t* *u*

--	--

- | | |
|---|---|
| | 0 |
| 1 | 1 |
| 2 | 2 |
| 3 | 3 |
| 4 | 4 |
| 5 | 5 |
| 6 | 6 |
| 7 | 7 |
| 8 | 8 |
| 9 | 9 |

7 *h* *t* *u*

--	--	--

- | | | |
|---|---|---|
| | 0 | 0 |
| 1 | 1 | 1 |
| 2 | 2 | 2 |
| 3 | 3 | 3 |
| 4 | 4 | 4 |
| 5 | 5 | 5 |
| 6 | 6 | 6 |
| 7 | 7 | 7 |
| 8 | 8 | 8 |
| 9 | 9 | 9 |

8 *h* *t* *u*

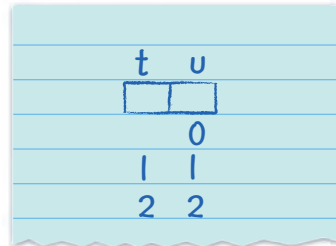
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- | | | |
|---|---|---|
| | 0 | 0 |
| 1 | 1 | 1 |
| 2 | 2 | 2 |
| 3 | 3 | 3 |
| 4 | 4 | 4 |
| 5 | 5 | 5 |
| 6 | 6 | 6 |
| 7 | 7 | 7 |
| 8 | 8 | 8 |
| 9 | 9 | 9 |

Working Strategically

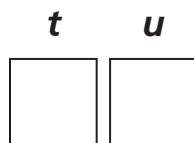
NCTM Standards 1, 2, 6, 7, 8, 9, 10

On your own piece of paper, you can make a diagram like the one shown below to help you solve the puzzle.

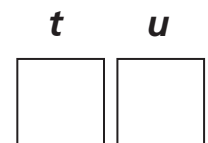


Remember that when you think there are just a few possible mystery numbers, list them all. Then look for ways to cross out numbers.

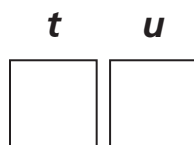
- 1 **A** I am an odd number.
B The product of my digits is 7.
C $u < t$



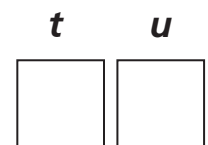
- 2 **A** I am greater than 7×9 .
B The product of my digits is 24.
C I have less than 9 groups of 10.
D I do not have two even digits.



- 3 **A** t is even.
B I am a multiple of 5.
C $u + t > 11$
D I have 5 units.



- 4 **A** I am between 7×5 and 7×7 .
B The product of my digits is 12.
C $u < t$



- 5** **A** You can show me with a group of 9 base-ten blocks.
B $t \times u = 18$
C $t > u$
D I am an odd number.

<i>t</i>	<i>u</i>

- 6** **A** I have more than 3 tens.
B $t \times u = 8$
C I am a square number.

<i>t</i>	<i>u</i>

- 7** **A** You can show me with a group of 17 base-ten blocks.
B I am a multiple of 10.
C $h < t$

<i>h</i>	<i>t</i>	<i>u</i>

8 Challenge

- A** I am an even number.
B $h \times t = 0$
C $h \times u = u$
D $u = 8$

<i>h</i>	<i>t</i>	<i>u</i>



- 9** Describe how you solved one of the puzzles on page 77 or page 78.

Place Value with Larger Numbers

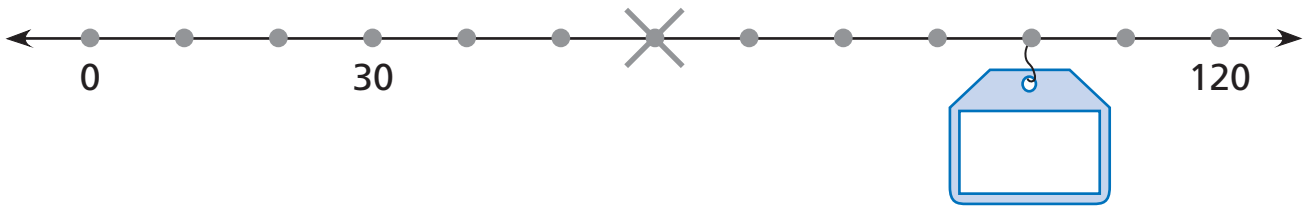
NCTM Standards 1, 6, 8, 9, 10

**Draw a line to connect each number to its name.
Not all names will be used.**

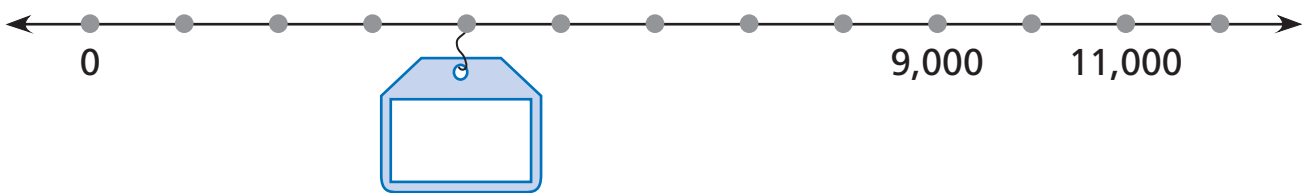
- | | |
|----------|-----------------|
| 1 200 | thirty thousand |
| 2 3,000 | two thousand |
| 3 400 | three hundred |
| 4 5,000 | forty |
| 5 50 | five thousand |
| 6 10,000 | two hundred |
| 7 30,000 | three thousand |
| 8 4,000 | four hundred |
| 9 1,000 | fifty |
| 10 900 | four thousand |
| | nine hundred |
| | ten thousand |
| | one thousand |
| | nine thousand |

Draw an **X** to show where each number would be.
Fill in the numbers in the tags.

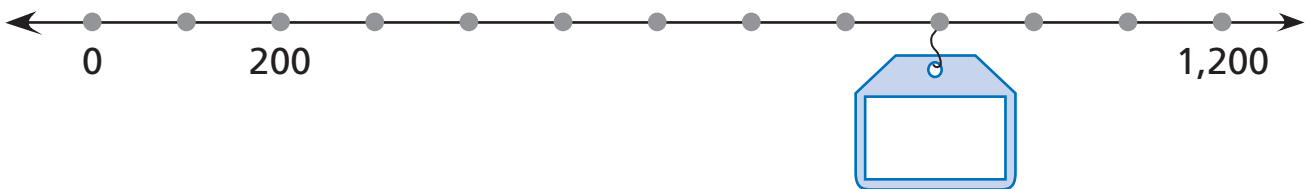
11 sixty



12 seven thousand



13 six hundred



14 Petra saw 280 birds on her nature hike. She rounds to the nearest hundred when she tells her mom how many birds she saw. What does Petra tell her mom she saw? _____

15 There are 47 third graders going on a field trip to the wildlife sanctuary. Round the number of third graders to the nearest ten. _____

16 **Challenge** Look at 23,578.

What digit is in the hundreds place?

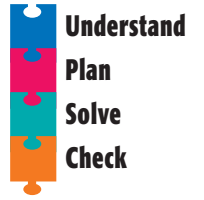
What digit is in the ten-thousands place?

What digit is in the thousands place?

Problem Solving Strategy

Make an Organized List

NCTM Standards 1, 6, 7, 8, 9



- 1 Two sisters are nicknamed V and Z. They both just had birthdays. Use the clues to find their ages.

- A** Z is younger than 8×3 .
B Z is older than V.
C V is older than 3×6 .
D Their ages are both even.

V is years old.

Z is years old.

- 2 Three children in a family are nicknamed J, K, and L. Use the clues to find who is a sister and who is a brother.

- A** Only two of the children are boys.
B J is the brother of K.
C L is the brother of K.

J is a .

K is a .

L is a .

Problem Solving Test Prep

Choose the correct answer.

- 1 What is the difference between the largest two-digit number and the smallest two-digit number that can be made using the digits 3 and 9?
- A. 39 C. 54
B. 45 D. 93
- 2 Colleen uses small cubes to make a staircase. The steps have these numbers of cubes: 3, 6, 9, and 12. If she keeps following her pattern and makes the staircase taller, how many cubes will she need for the sixth step?
- A. 18 C. 16
B. 17 D. 15
- 3 Jackson buys 2 pens and pays 15¢ each for them. He now has 12¢. What is the smallest number of coins he could have had before he bought the pens?
- A. 4 C. 6
B. 5 D. 7
- 4 Which of these numbers could be the answer to this puzzle?
- I am an even number greater than 40 and less than 60. What number am I?
- A. 40, 42, or 48
B. 42, 48, or 55
C. 46, 54, or 60
D. 44, 50, or 58

Show What You Know

Solve each problem. Explain your answer.

- 5 Delroy can choose from vanilla or chocolate ice cream. He can have a 1 scoop or 2 scoops of the same flavor. Homer can choose from 3 flavors, but can have only 1 scoop. Who has more choices? How many more?
- _____
- _____
- _____
- 6 Maria has a black, a brown, and a blue pair of pants. She has a black and a brown sweater. She makes outfits with a pair of pants and a sweater. How many extra outfits can she make if she gets one more sweater?
- _____
- _____
- _____

Review/Assessment

NCTM Standards 1, 4, 6, 7, 8, 9, 10

Solve. Lessons 1 and 2

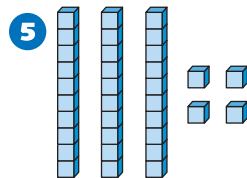
1 The school was having its fair in 2 weeks and 4 days. In how many days will the school be having its fair?

2 Sonya has 23 cents with only 3 pennies and the rest in nickels. How many nickels does Sonya have?

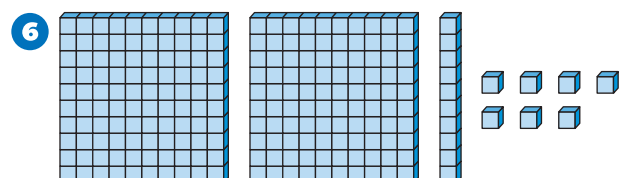
3 In 130 seconds, the bell will ring. After 2 minutes, how much more time will pass before the bell rings?

4 Maria received 2 quarters and 3 pennies in change. How much money does Maria have?

Write the number that matches each group of base-ten blocks. Lesson 3



number:



number:

Solve. Lesson 7

7 Round 6,679 to the nearest thousand.

8 Round 486 to the nearest hundred.

9 Round 81 to the nearest ten.

10 Round 121 to the nearest hundred.

11 Round 78,345 to the nearest ten thousand.

12 Find the mystery number. *Lessons 4, 5, 6, and 8*

Who Am I?

- A** I am a two-digit number.
- B** I am an even number.
- C** My tens digit is 4 more than my ones digit.
- D** The product of my tens and ones digit is 12.

You can use this space to make a list.

mystery number:

Draw a line to connect each number to its name.

Not all names will be used. *Lessons 3 and 7*

13 7,000

14 600

15 20,000

16 5,000

17 7,035

six thousand

six hundred

five thousand

seven thousand

seventy thousand

thirty thousand

twenty thousand

seven thousand,
three hundred five

seven thousand, thirty-five