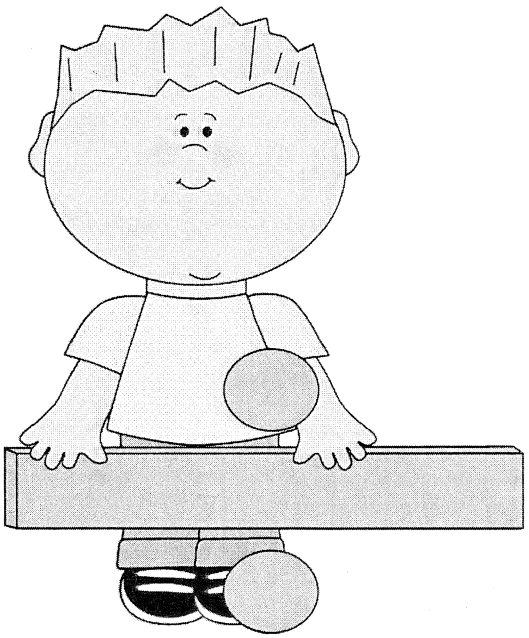
Unit 8

Study Guide

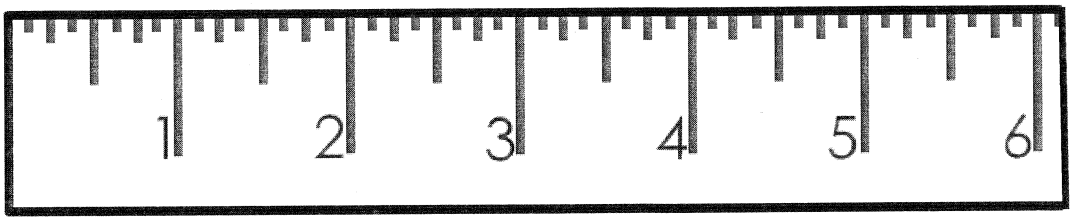
Multiplication and Division



Name: _____ Date: _____

EVERYDAY MATHEMATICS—3rd Grade
Unit 8 Review: Multiplication and Division

1)



a. Make a dot at 3 ½ inches. Label it with the letter A.
b. Make a dot at 4 ¼ inches. Label it with the letter B.
c. Make a dot at 5 ¾ inches. Label it with the letter C.

2) Measure the line segment below to the nearest ¼ inch.

_____

about _____ in.

3) Write a helper fact and use it to help you solve.

a. 4 X 80 = _____

Fact I used to help:

_____

b. 70 X 5 = _____

Fact I used to help:

_____

c. 90 X 4 = _____

Fact I used to help:

_____

Use the helper fact to help you fill in the missing factors.

d. Helper fact: 3 X 4 = _____

30 X _____ = 120

e. Helper fact: _____ = 6 X 3

180 = _____ X 3

f. Helper fact: 6 X 8 = _____

_____ X 8 = 480

Unit 8 Review (continued)

4) Write in factor pairs to make the number sentences true.

_____ X _____ = 15

21 = _____ X _____

_____ X _____ = 30

5) Four friends want to share $56. They have $10 bills and $1 bills. They can exchange larger bills for smaller bills if they need to. Write a number model. Use numbers or pictures to show how you solved the problem.

The letter _____ stands for _____

_____

(number model with letter for unknown)

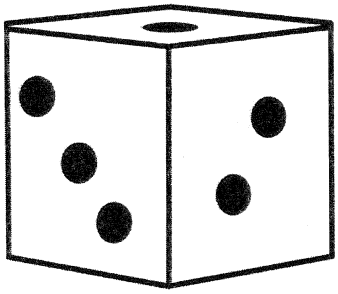
Answer: Each friend gets $_____.

Unit 8 Review (continued)

6) Here is a *Factor Bingo* game mat. You draw a 3 card, Circle at least two products with a factor of 3.

9	12	13	30	19
32	28	55	16	10
18	40	24	26	8
41	35	29	20	14
17	50	22	15	27

7) Explain why the shape in this picture is a cube.



Name: _____ Date: _____

EVERYDAY MATHEMATICS—3rd Grade
Unit 8 Challenge Review

1) Suppose 5 friends want to share $62. They have $10 bills, $1 bills, and coins. Show or explain how much money each friend would get. Be sure to describe each step of how you shared the $62.

Number model:_____

Each friend gets _____

2) Here is a game mat for *Speed Factor Bingo*.

25	10	17	6	16
8	11	4	5	22
13	32	54	26	55
9	24	30	12	18
14	42	35	90	48

In *Speed Factor Bingo,* a player draws a number card and covers all the products that have that number as a factor.

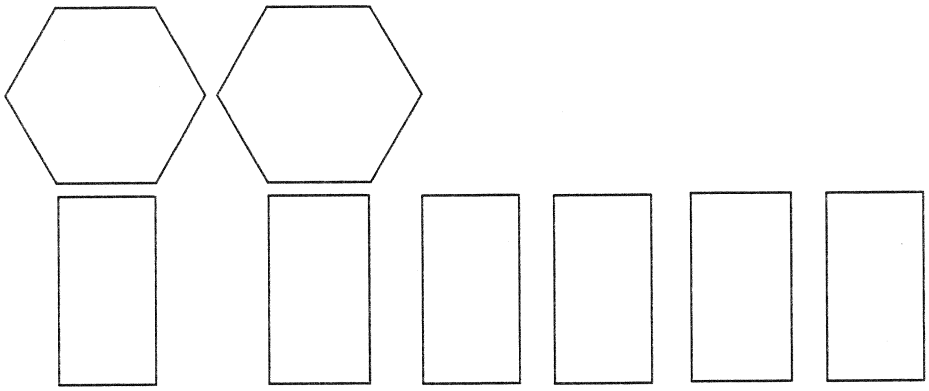
Name a factor card that would allow a player to get a bingo in one turn.

_____

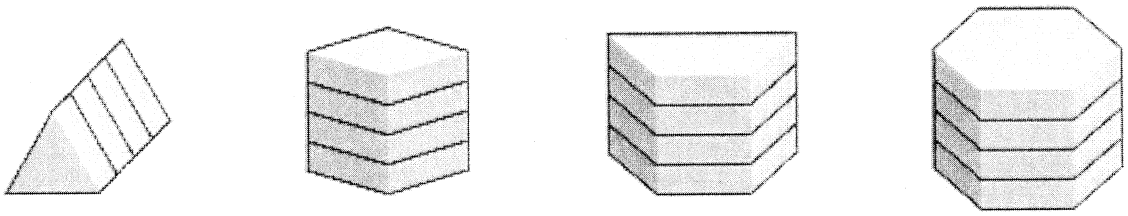
Draw a line through the row, column, or diagonal to show the bingo.

Unit 8 Challenge Review (continued)

3) Adam traced the bases and other faces of a pattern-block prism.



Circle the picture of the prism that matches his tracings.



Name the shapes of its bases. _____

Name the shapes of its other faces. _____

Skyler says this a picture of a rectangular prism.
Explain why you agree or disagree.

_____

Name: _____ Date: _____

EVERYDAY MATHEMATICS—3rd Grade
Unit 8 Cumulative Review

For each story:

Write a number model. Use a letter for what you want to find out. You may complete the diagram to help.

Solve. Then write the number model with your answer to check your work.

1) Julian bought 6 boxes of markers.
There were 9 markers in each box.

How many markers did she buy in all?

boxes	markers in each box	markers in all

The letter _____ represents _____.

_____
(number model with letter)

Julian bought _____.
(unit)

_____
(number model with answer)

Unit 8 Cumulative Review (continued)

2) The science teacher shared 60 rocks equally among the 10 children in the science club. How many rocks did each child get?

children	rocks per child	rocks in all

The letter _____ represents _____.

_____
(number model with letter)

Each child got _____.
(unit)

_____
(number model with answer)

3) Fill in the blanks.

a. 6 X _____ = 42

b. _____ = 4 X 9

c. _____ X 8 = 32

d. 35 = _____ X 7

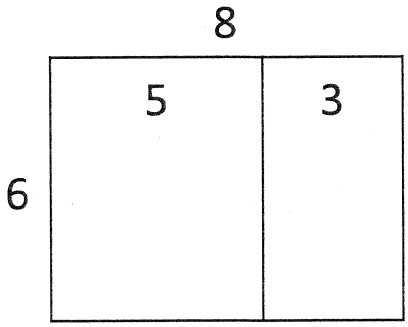
e. If 6 X _____ = 48, then 48 ÷ 6 = _____

f. If _____ X 9 = 81, then 81 ÷ 9 = _____

g. If 7 X _____ = 56, then 56 ÷ 7 = _____

Unit 8 Cumulative Review (continued)

4) Cameron used the break-apart strategy to solve 6 X 8 by breaking 8 into the easier numbers 5 and 3. See his picture below.



Use Cameron's easier numbers and drawing to write number models that he can use to solve 6 X 8.

6 X 8 = _____

5) Fill in the blanks.

a. 16 ÷ _____ = 4

b. 25 ÷ _____ = 5

c. _____ ÷ 6 = 6

d. 64 ÷ 8 = _____

Unit 8 Cumulative Review (continued)

6) Charlotte has 6 boxes of bouncy balls.
Each box has 3 purple bouncy balls and 7 green bouncy balls.
How many bouncy balls does Charlotte have in all?

The letter *B* represents the number of bouncy balls that Charlotte has.

a. Underline the number model that fits the story.

$6 \times 3 + 7 = B$ $(6 + 3) \times 7 = B$ $6 \times (7 + 3) = B$

b. Solve the number story. You may draw a picture to help.

Answer:_____
(unit)

c. Write the number model with your answer to check your work.

_____

Unit 8 Cumulative Review (continued)

7) Cross out the names that do not belong.

Add at least two more names with parenthesis that belong in the name-collection box.

24		
	(10 X 2) + 4	10 X (2 + 4)
	(10 + 14) X 0	(8 X 3) X 1
	(12 + 2) X 4	

8) For each problem, make an estimate and solve. Check to make sure your answer makes sense.

UNIT

a. Estimate: _____

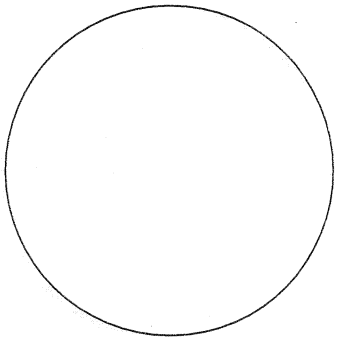
$$\begin{array}{r} 4\ 8\ 7 \\ +\ 2\ 9\ 3 \\ \hline \end{array}$$

b. Estimate: _____

652 – 347 = _____

Unit 8 Cumulative Review (continued)

9) Partition the circle into 4 equal parts. Label each part.



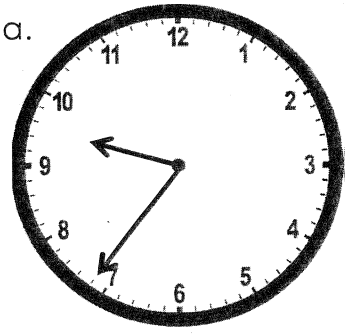
Shade ¼ of the circle.

Write two fractions that name the **unshaded** part of the circle.

_____ _____

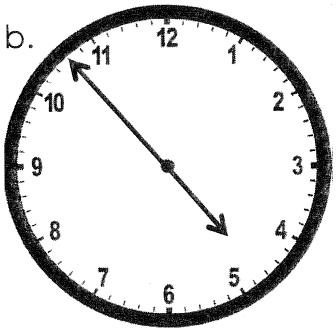
10) Write the time shown on the clocks below.

a.



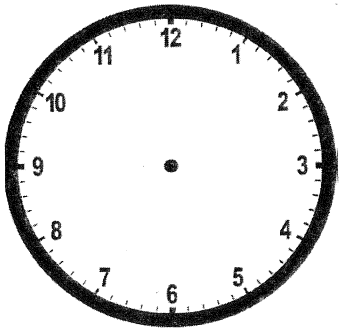
_____

b.



_____

c. Draw the hour and minute hands to show the time 15 minutes before 8:43.



What time does the clock show? _____

Unit 8 Cumulative Review (continued)

11) Jack practiced piano for 40 minutes.
He started playing at 3:27. What time did he finish?

He finished at _____ P.M.

12) Owen has 800 milliliters (mL) of water in his watering can.
One jar holds 368 mL of water and the other holds 591 mL of water.
How much water does Owen need to fill both jars?

a. Estimate:_____

Answer:_____
(unit)

b. Does Owen have enough water to fill both jars? _____
Did you need to find an exact answer to decide whether Owen has enough water? Explain.

_____

_____

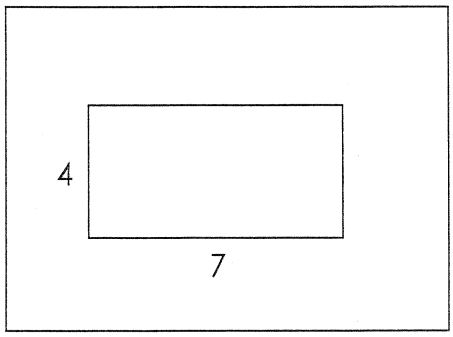
_____

_____

_____

Unit 8 Cumulative Review (continued)

13) You draw this card in *The Area and Perimeter Game:*



a. Find the area and the perimeter.

Area= _____ square units

Perimeter= _____ units

b. Explain how you found the area.

_____

_____

14) Jocelyn wants to cover a bulletin board with cloth.
The area she wants to cover is 49 square inches.
If Jocelyn wants a square piece of cloth, how long and wide should she cut the cloth?
Draw a picture of the cloth and label the side lengths.

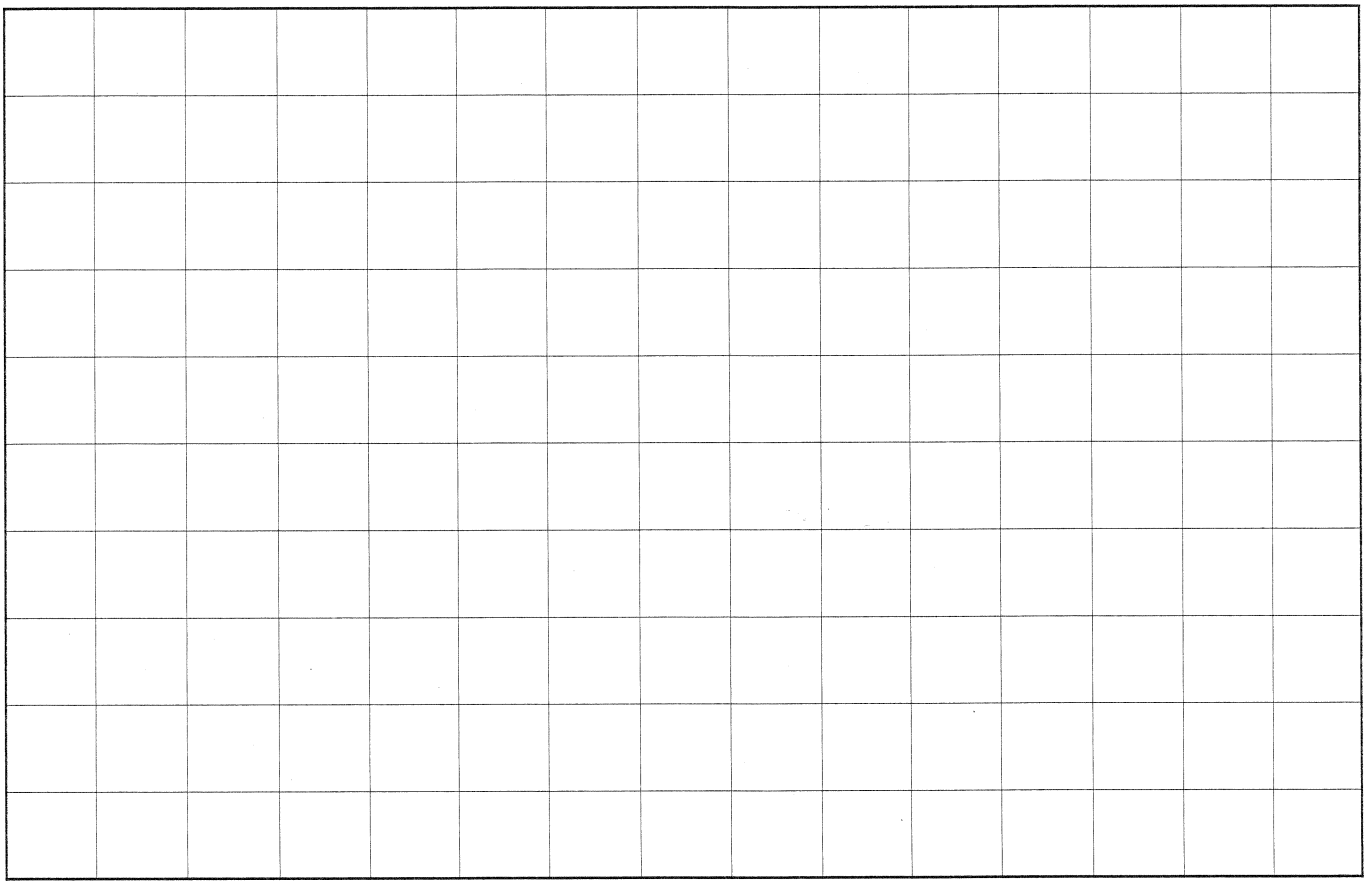
The cloth should be cut _____ (unit) long and _____ (unit) wide.

What is the perimeter of the cloth? _____ (unit).

Unit 8 Cumulative Review (continued)

17) Draw a rectangle with a perimeter of 20 centimeters.
Then draw a different rectangle with the same perimeter.

Label your rectangles A and B.



= 1 square cm

b. Explain how you know the perimeters for Rectangle A and Rectangle B are 20 centimeters.

_____

_____

_____

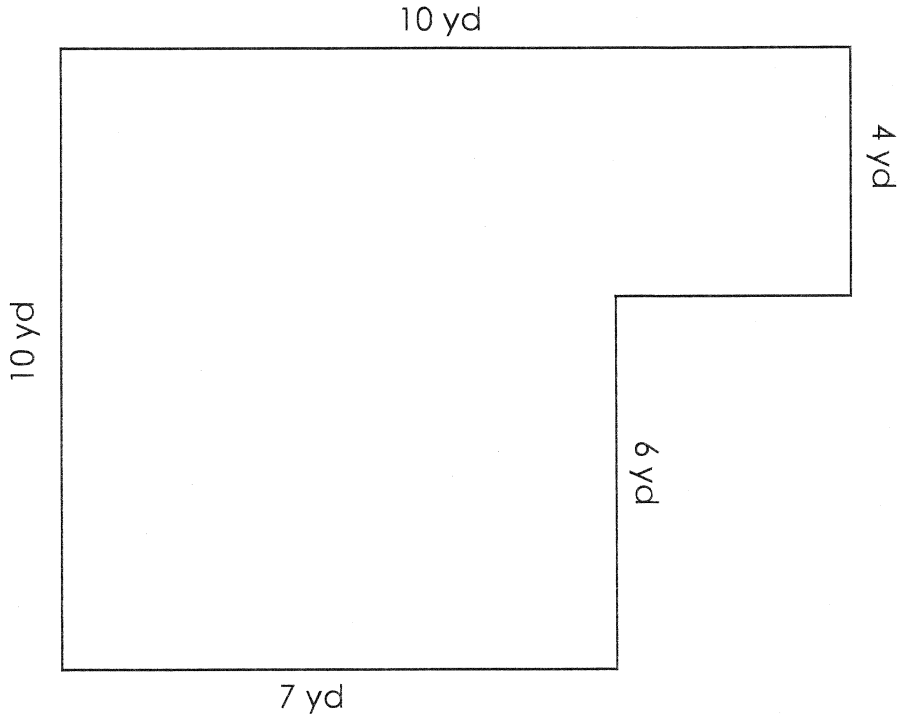
_____

c. What is the area of Rectangle A? _____
(unit)

d. What is the area of Rectangle B? _____
(unit)

Unit 8 Cumulative Review (continued)

15) Mr. Portillo's class is figuring out the area of the floor in the science lab. Here is a sketch of the science lab.



Draw a line to make two smaller rectangles you can use to find the area. Show your work. Write the number models you use.

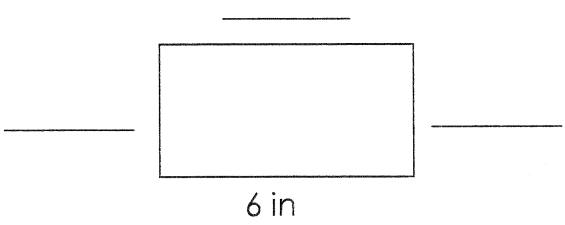
Number models:_____

_____

The area of the science lab is _____.
(unit)

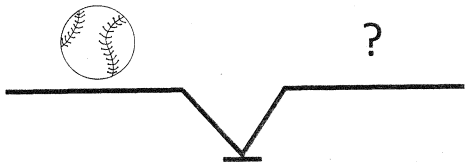
16) The perimeter of this rectangle is 18 inches.

Label the missing side lengths.



Unit 8 Cumulative Review (continued)

18) The mass of a softball is 184 grams.
Daniel has one 100-gram mass, one 50-gram mass, five 10-gram masses, and five 1-gram masses
What masses could he use to balance the softball?



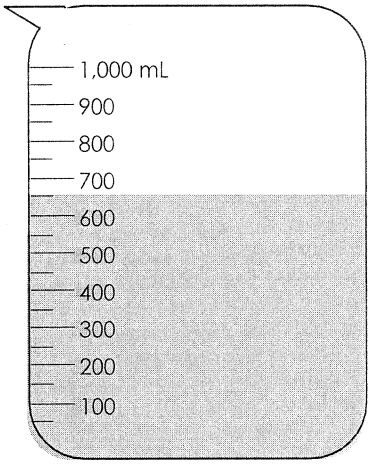
_____

_____

19) The 1-liter beaker at the right has 650 milliliters of water.

Elizabeth wants to have a full liter of water.
How much more water does she need to add?

She needs _____ more milliliters of water to make 1 liter.

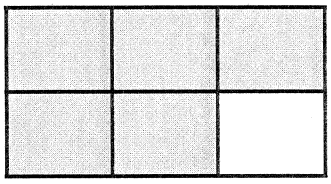


20) Juan said $\frac{5}{6}$ of Rectangle A is equal to $\frac{5}{6}$ of Rectangle B.

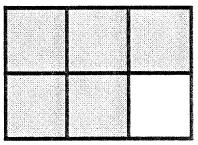
Julianna said $\frac{5}{6}$ of Rectangle A is not equal to $\frac{5}{6}$ of Rectangle B.

With whom do you agree? Explain.

A



B



_____

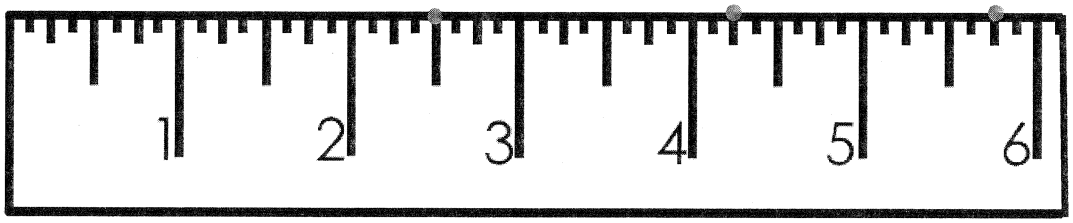
_____

_____

Name: *ANSWER KEY* Date: _____

EVERYDAY MATHEMATICS—3rd Grade
Unit 8 Review: Multiplication and Division

1)



a. Make a dot at 3 ½ inches. Label it with the letter A.
b. Make a dot at 4 ¼ inches. Label it with the letter B.
c. Make a dot at 5 ¾ inches. Label it with the letter C.

2) Measure the line segment below to the nearest ¼ inch.

about 5 ¼ in.

*Please Note: Individual printer/copier settings may alter the actual measurement. Please check your copy before referring to the answer key.

3) Write a helper fact and use it to help you solve.

a. 4 X 80 = 320

Fact I used to help:

4 X 8 = 32

b. 70 X 5 = 350

Fact I used to help:

7 X 5 = 35

c. 90 X 4 = 360

Fact I used to help:

9 X 4 = 36

Use the helper fact to help you fill in the missing factors.

d. Helper fact: 3 X 4 = 12

30 X 4 = 120

e. Helper fact: 18 = 6 X 3

180 = 60 X 3

f. Helper fact: 6 X 8 = 48

60 X 8 = 480

Unit 8 Review (continued) *ANSWER KEY*

4) Write in factor pairs to make the number sentences true.

3 X 5 = 15

21 = 3 X 7

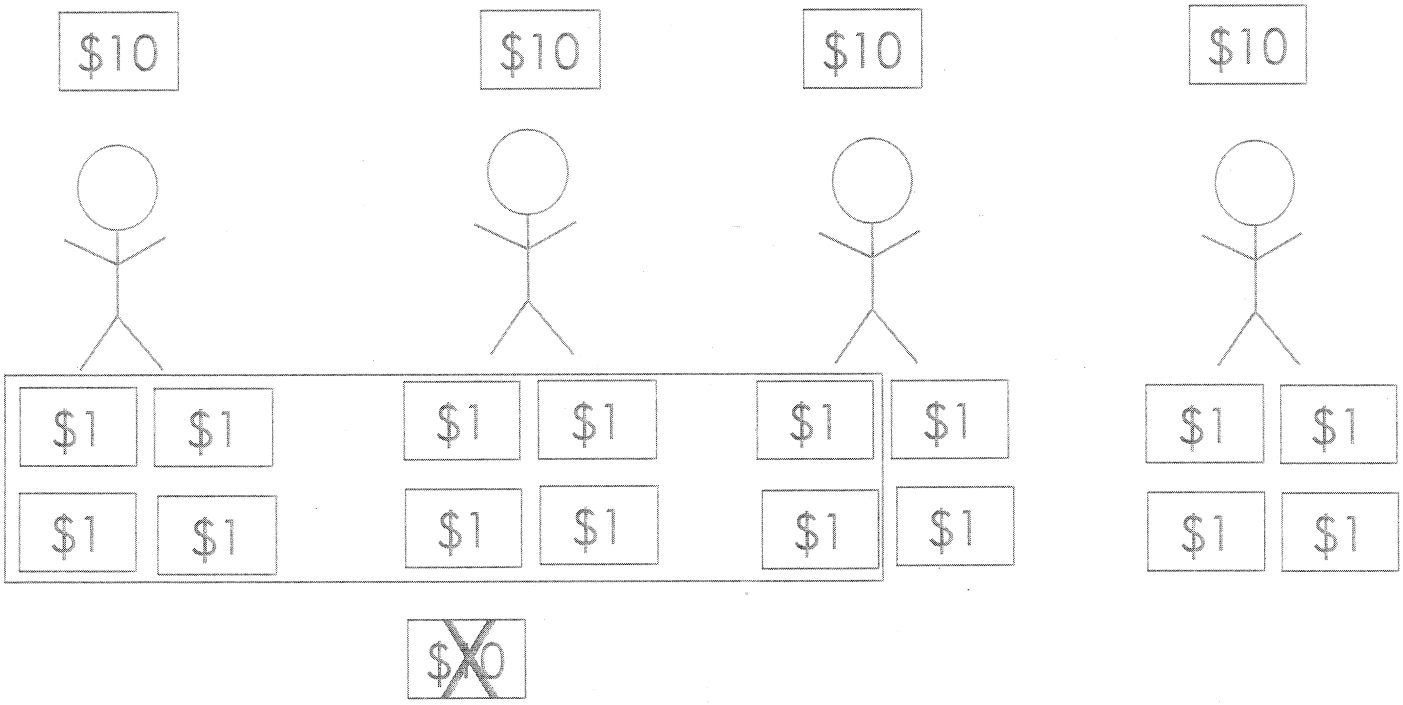
5 X 6 = 30 10 X 3

5) Four friends want to share $56. They have $10 bills and $1 bills. They can exchange larger bills for smaller bills if they need to. Write a number model. Use numbers or pictures to show how you solved the problem. Possible answer:

The letter D stands for number of dollars each friend gets.

56 ÷ 4 = D or 4 X D = 56

(number model with letter for unknown)



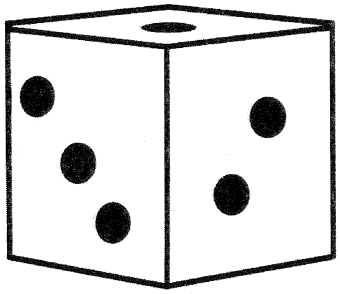
Answer: Each friend gets $14.

Unit 8 Review (continued) *ANSWER KEY*

6) Here is a *Factor Bingo* game mat. You draw a 3 card, Circle at least two products with a factor of 3.

9	12	13	30	19
32	28	55	16	10
18	40	24	26	8
41	35	29	20	14
17	50	22	15	27

7) Explain why the shape in this picture is a cube.



Possible answer: The shape of its faces are all squares. A cube must have 6 equal square faces.

Name: *ANSWER KEY* Date: _____

EVERYDAY MATHEMATICS—3rd Grade
Unit 8 Challenge Review

1) Suppose 5 friends want to share $62. They have $10 bills, $1 bills, and coins. Show or explain how much money each friend would get. Be sure to describe each step of how you shared the $62.

Number model: 62 ÷ 5 = ? or 4 X ? = 62

Each friend gets $12.40

2) Here is a game mat for *Speed Factor Bingo*.

25	10	17	6	16
8	11	4	5	22
13	32	54	26	55
~~9~~	~~24~~	~~30~~	~~12~~	~~18~~
14	42	35	90	48

In *Speed Factor Bingo,* a player draws a number card and covers all the products that have that number as a factor.

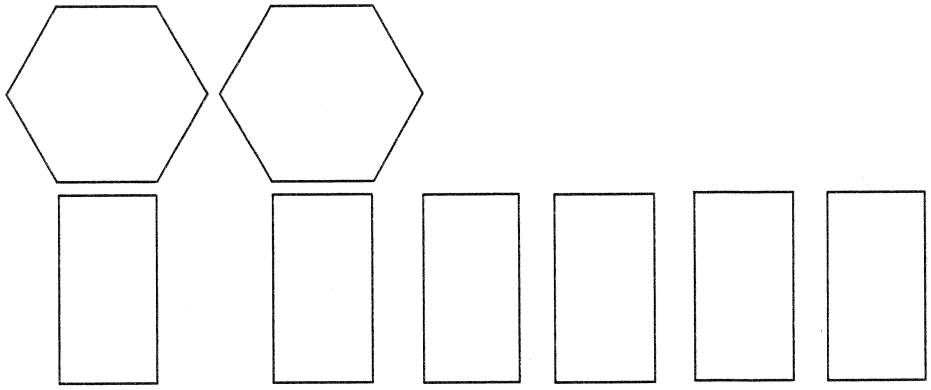
Name a factor card that would allow a player to get a bingo in one turn.

3

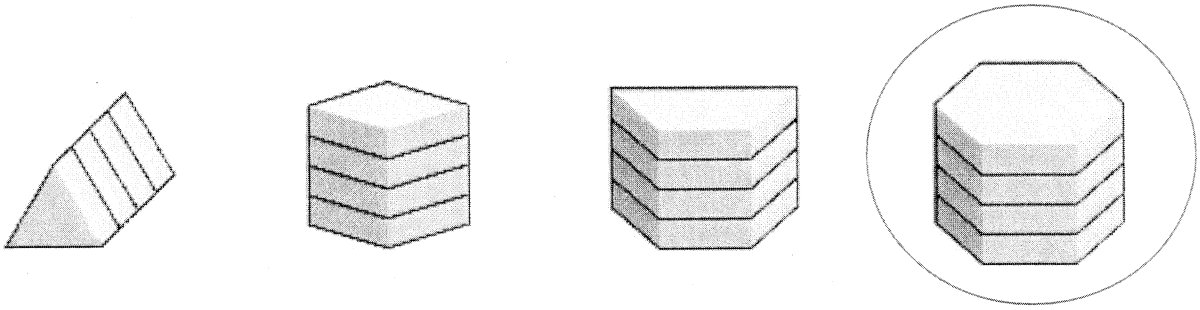
Draw a line through the row, column, or diagonal to show the bingo.

Unit 8 Challenge Review (continued) *ANSWER KEY*

3) Adam traced the bases and other faces of a pattern-block prism.



Circle the picture of the prism that matches his tracings.



Name the shapes of its bases. hexagons

Name the shapes of its other faces. rectangles

Skyler says this a picture of a rectangular prism.
Explain why you agree or disagree.

Possible answer: I disagree because its bases are hexagons. A prism only has 2 bases.

Name: *ANSWER KEY* Date: _____

EVERYDAY MATHEMATICS—3rd Grade
Unit 8 Cumulative Review

For each story:

Write a number model. Use a letter for what you want to find out. You may complete the diagram to help.

Solve. Then write the number model with your answer to check your work.

1) Julian bought 6 boxes of markers. There were 9 markers in each box.

How many markers did she buy in all?

boxes	markers in each box	markers in all
6	9	?

The letter M represents markers.

6 X 9 = M

(number model with letter)

Julian bought 54 markers.

(unit)

6 X 9 = 54

(number model with answer)

Unit 8 Cumulative Review (continued) *ANSWER KEY*

2) The science teacher shared 60 rocks equally among the 10 children in the science club. How many rocks did each child get?

children	rocks per child	rocks in all
10	?	60

The letter R represents rocks.

60 ÷ 10 = R
(number model with letter)

Each child got 6 rocks.
(unit)

60 ÷ 10 = 6
(number model with answer)

3) Fill in the blanks.

a. 6 X 7 = 42

b. 36 = 4 X 9

c. 4 X 8 = 32

d. 35 = 5 X 7

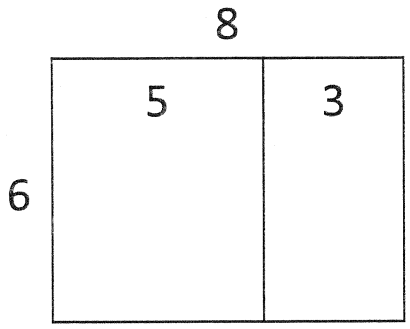
e. If 6 X 8 = 48, then 48 ÷ 6 = 8

f. If 9 X 9 = 81, then 81 ÷ 9 = 9

g. If 7 X 8 = 56, then 56 ÷ 7 = 8

Unit 8 Cumulative Review (continued) *ANSWER KEY*

4) Cameron used the break-apart strategy to solve 6 X 8 by breaking 8 into the easier numbers 5 and 3. See his picture below.



Use Cameron's easier numbers and drawing to write number models that he can use to solve 6 X 8.

5 X 6 = 30
3 X 6 = 18
30 + 18 =48

6 X 8 = 48

5) Fill in the blanks.

a. 16 ÷ 4 = 4

b. 25 ÷ 5 = 5

c. 36 ÷ 6 = 6

d. 64 ÷ 8 = 8

Unit 8 Cumulative Review (continued) *ANSWER KEY*

6) Charlotte has 6 boxes of bouncy balls.
Each box has 3 purple bouncy balls and 7 green bouncy balls.
How many bouncy balls does Charlotte have in all?

The letter *B* represents the number of bouncy balls that Charlotte has.

a. Underline the number model that fits the story.

$6 \times 3 + 7 = B$ $(6 + 3) \times 7 = B$ $6 \times (7 + 3) = B$

b. Solve the number story. You may draw a picture to help.

Answer: 60 bouncy balls
(unit)

c. Write the number model with your answer to check your work.

$6 \times (7 + 3) = 60$

Unit 8 Cumulative Review (continued) *ANSWER KEY*

7) Cross out the names that do not belong.

Add at least two more names with parenthesis that belong in the name-collection box.

24		
	(10 X 2) + 4	~~10 X (2 + 4)~~
	~~(10 + 14) X 0~~	(8 X 3) X 1
	~~(12 + 2) X 4~~	

Answers will vary. Possible answers:
(6 X 3) + 6 3 + (3 X 7)

8) For each problem, make an estimate and solve. Check to make sure your answer makes sense.

UNIT
Answers will vary.

a. Estimate: 490 + 290 = 780 or 500 + 300 = 800

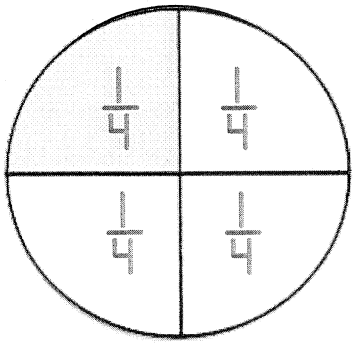
$$\begin{array}{r} 487 \\ +\ 293 \\ \hline 780 \end{array}$$

b. Estimate: 650 – 350 = 300

652 – 347 = 305

Unit 8 Cumulative Review (continued) *ANSWER KEY*

9) Partition the circle into 4 equal parts. Label each part.



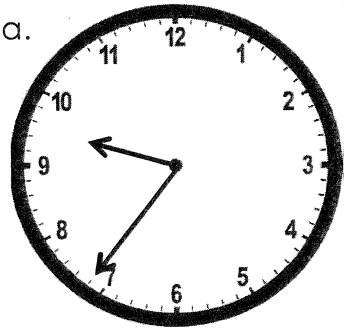
Shade ¼ of the circle.

Write two fractions that name the **unshaded** part of the circle.

$\frac{3}{4}$ $\frac{6}{8}$

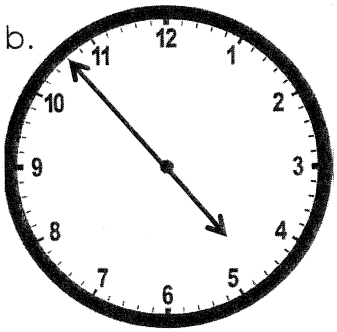
10) Write the time shown on the clocks below.

a.



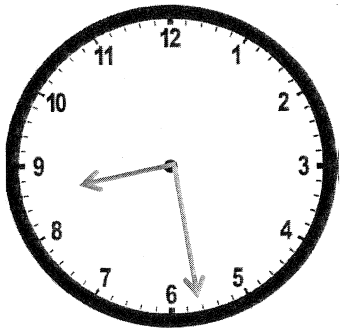
9:36

b.



4:53

c. Draw the hour and minute hands to show the time 15 minutes before 8:43.

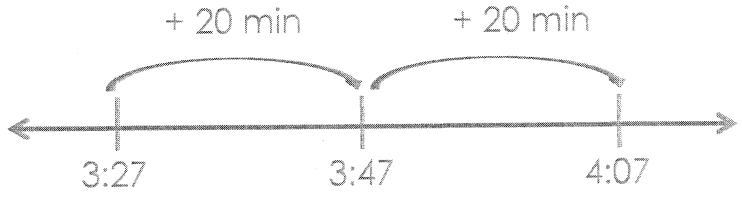


What time does the clock show? 8:28

Unit 8 Cumulative Review (continued) *ANSWER KEY*

11) Jack practiced piano for 40 minutes.
He started playing at 3:27. What time did he finish?

Possible strategy:



20 + 20 = 40

He finished at 4:07 P.M.

12) Owen has 800 milliliters (mL) of water in his watering can.
One jar holds 368 mL of water and the other holds 591 mL of water.
How much water does Owen need to fill both jars?

a. Estimate: 400 + 600 = 1,000 or 370 + 590 = 960

Answer: 959 mL
(unit)

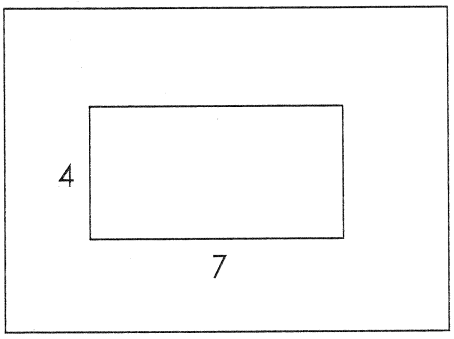
b. Does Owen have enough water to fill both jars? No

Did you need to find an exact answer to decide whether Owen has enough water? Explain.

Possible answer: No. I rounded 368 to 400 (or 370) and 591 to 600 (or 590). Both rounded numbers are more than the actual numbers, so the exact sum has to be less than 800. The sum is 1,000 (or 960), so Owen does not have enough water to fill both jars.

Unit 8 Cumulative Review (continued) *ANSWER KEY*

13) You draw this card in *The Area and Perimeter Game:*



a. Find the area and the perimeter.

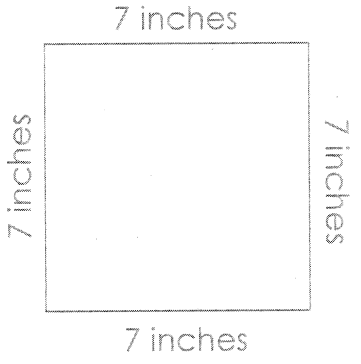
Area= 28 square units

Perimeter= 22 units

b. Explain how you found the area.

Possible answer: I multiplied 7 X 4 and got 28, so the area is 28 square units.

14) Jocelyn wants to cover a bulletin board with cloth.
The area she wants to cover is 49 square inches.
If Jocelyn wants a square piece of cloth, how long and wide should she cut the cloth?
Draw a picture of the cloth and label the side lengths.

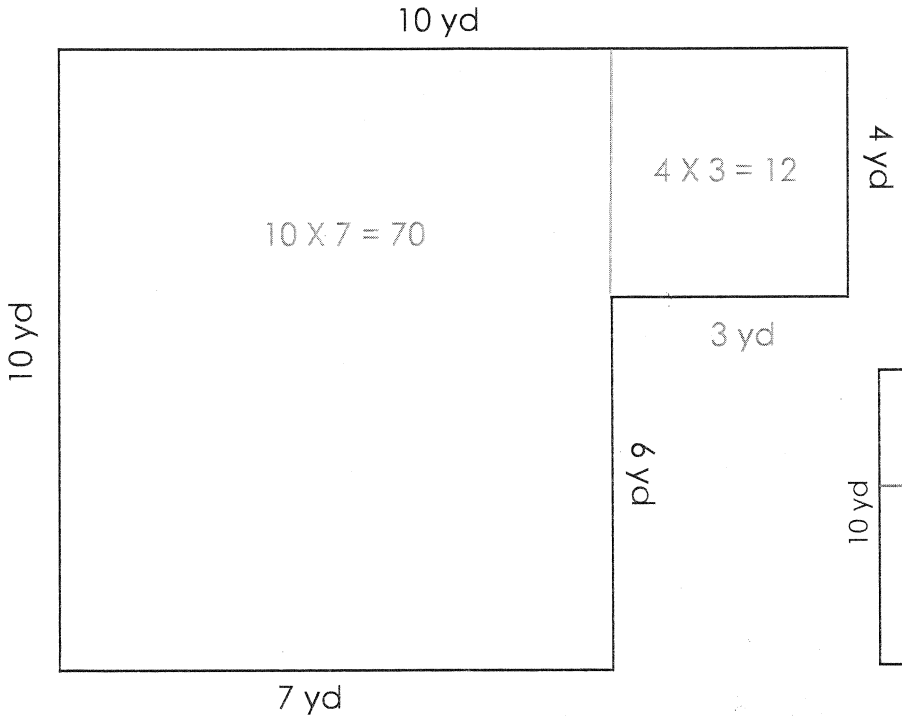


The cloth should be cut 7 inches (unit) long and 7 inches (unit) wide.

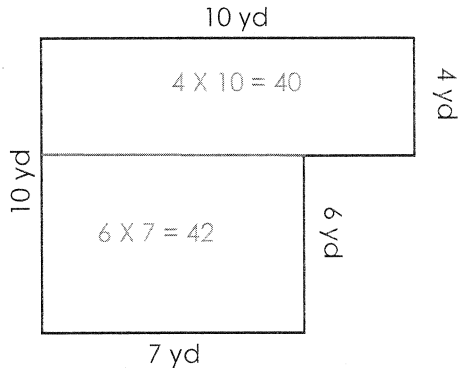
What is the perimeter of the cloth? 28 inches (unit).

Unit 8 Cumulative Review (continued) *ANSWER KEY*

15) Mr. Portillo's class is figuring out the area of the floor in the science lab. Here is a sketch of the science lab.



Alternate answer:



Draw a line to make two smaller rectangles you can use to find the area. Show your work. Write the number models you use.

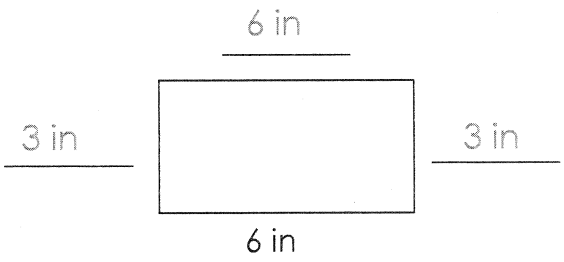
Number models: Possible answers: 10 X 7 = 70; 4 X 3 = 12; 70 + 12 = 82

4 X 10 = 40; 6 X 7 = 42; 40 + 42 = 82

The area of the science lab is 82 sq yd.
(unit)

16) The perimeter of this rectangle is 18 inches.

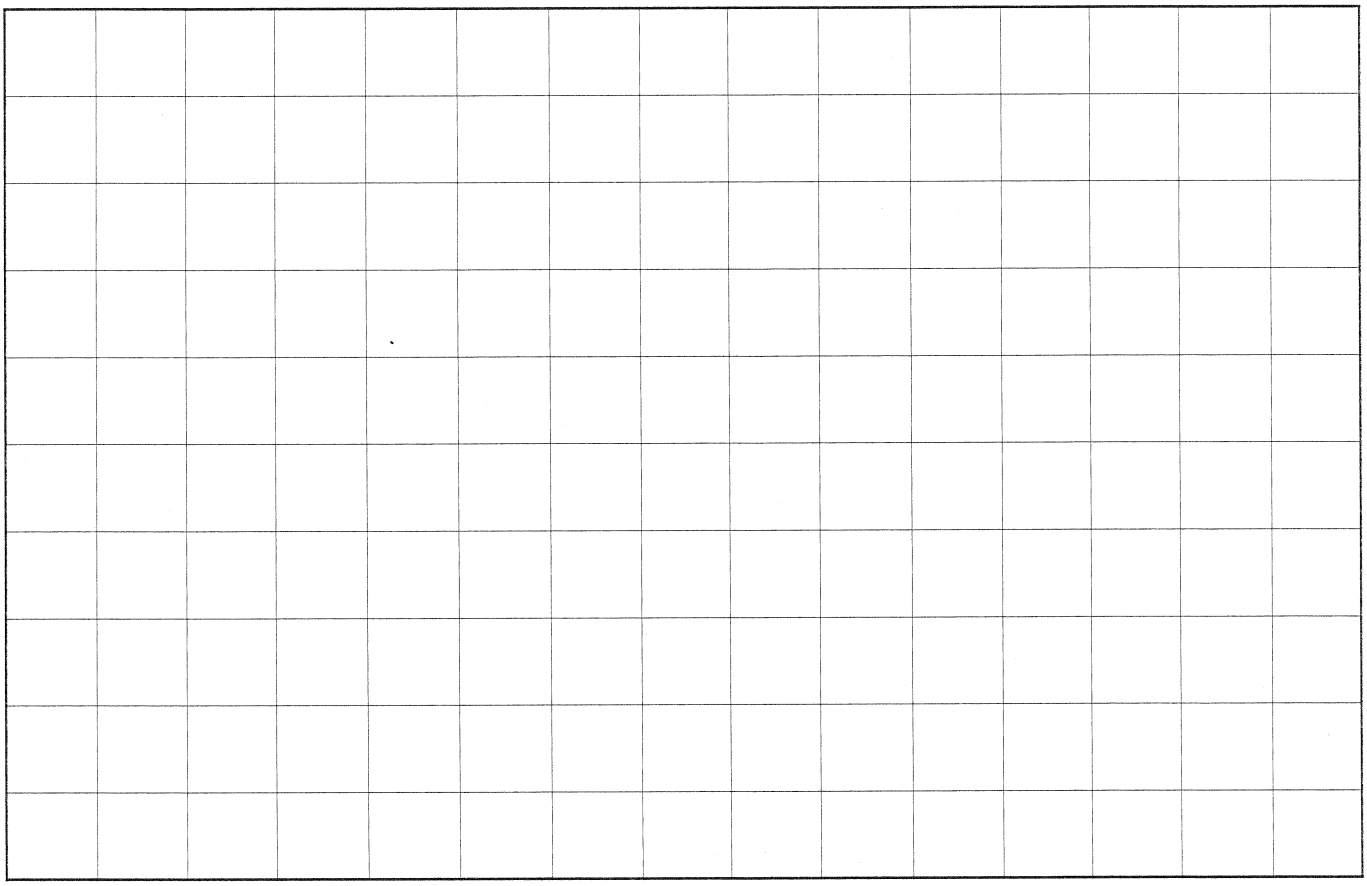
Label the missing side lengths.



Unit 8 Cumulative Review (continued) *ANSWER KEY*

17) Draw a rectangle with a perimeter of 20 centimeters.
Then draw a different rectangle with the same perimeter.

Label your rectangles A and B.



= 1 square cm

Answers will vary. Possible dimensions:
9 + 9 + 1 + 1; 8 + 8 + 2 + 2; 7 + 7 + 3 + 3;
6 + 6 + 4 + 4; 5 + 5 + 5 + 5

b. Explain how you know the perimeters for Rectangle A and Rectangle B are 20 centimeters.

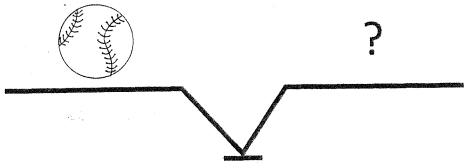
Possible answer: Rectangle A/B is ___ cm long and ___ cm wide. I added the lengths of the 4 sides.

c. What is the area of Rectangle A? Answers will vary. 9 X 1 = 9 sq cm; 8 X 2 = 16 sq cm; 7 X 3 = 21 sq cm; (unit)

d. What is the area of Rectangle B? 6 X 4 = 24 sq cm; 5 X 5 = 25 sq cm (unit)

Unit 8 Cumulative Review (continued) *ANSWER KEY*

18) The mass of a softball is 184 grams.
Daniel has one 100-gram mass, one 50-gram mass, five 10-gram masses, and five 1-gram masses
What masses could he use to balance the softball?

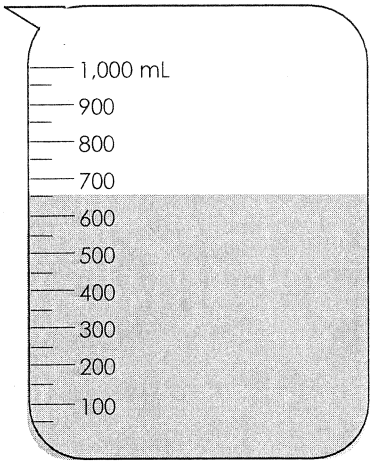


Possible answer: He could use a 100-gram mass, 50 gram mass, three 10-gram masses, and 4 1-gram masses.

19) The 1-liter beaker at the right has 650 milliliters of water.

Elizabeth wants to have a full liter of water.
How much more water does she need to add?

She needs 350 more milliliters of water to make 1 liter.

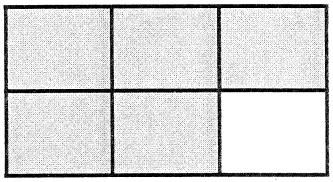


20) Juan said $\frac{5}{6}$ of Rectangle A is equal to $\frac{5}{6}$ of Rectangle B.

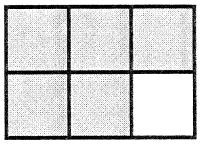
Julianna said $\frac{5}{6}$ of Rectangle A is not equal to $\frac{5}{6}$ of Rectangle B.

With whom do you agree? Explain.

A

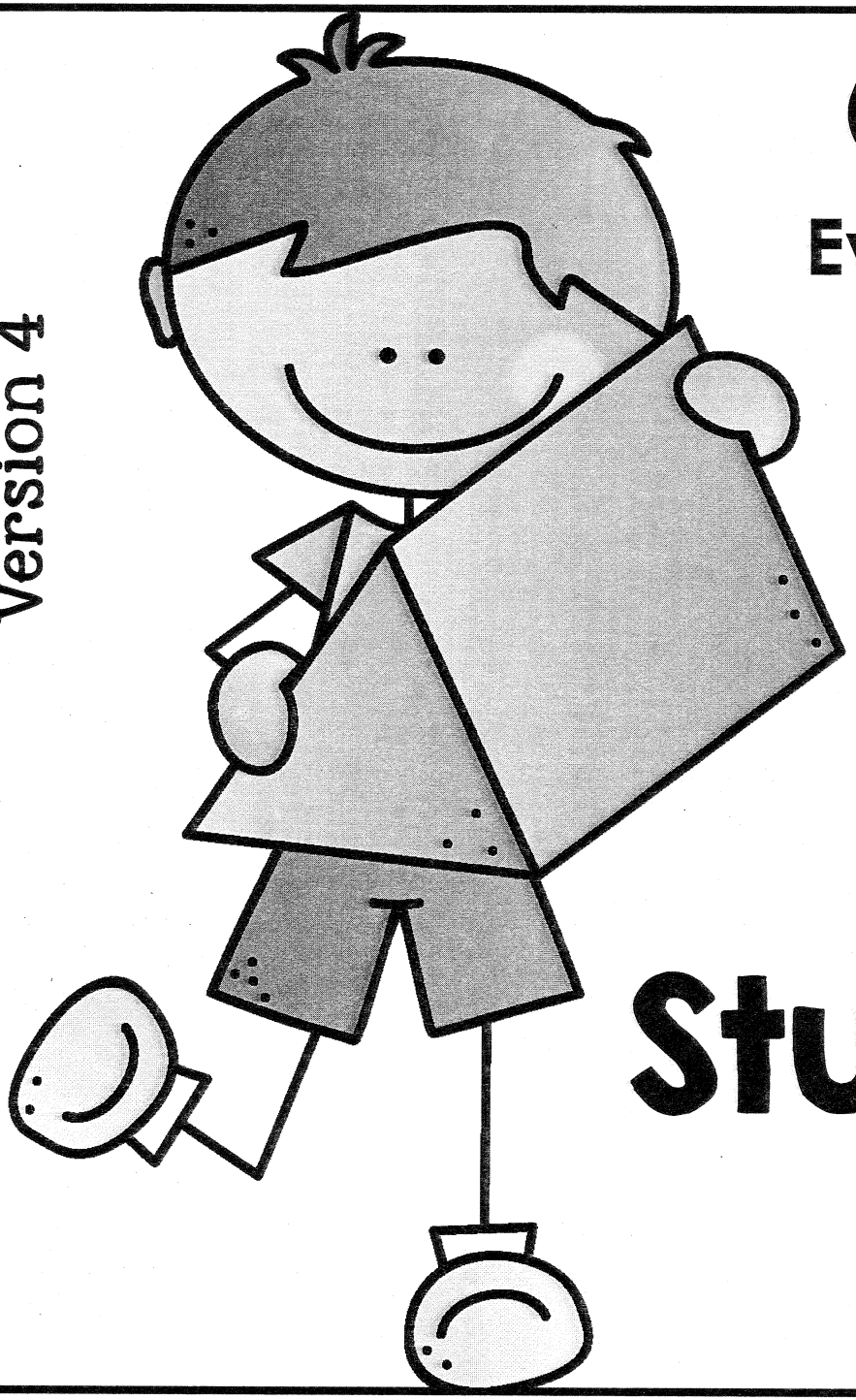


B



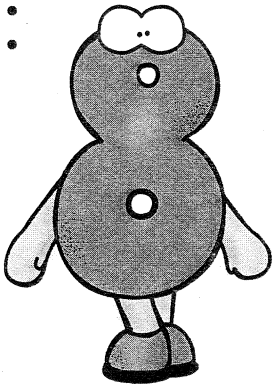
Possible answer: I agree with Julianna because the rectangles are different sizes. You cannot compare fractions unless the wholes are the same size.

EDM
Version 4



Grade 3

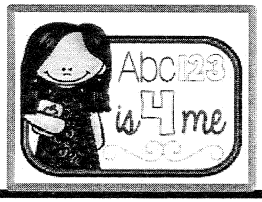
Everyday Math:



Unit

Multiplication & Division

Study Guide



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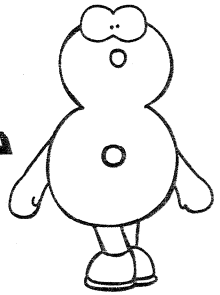
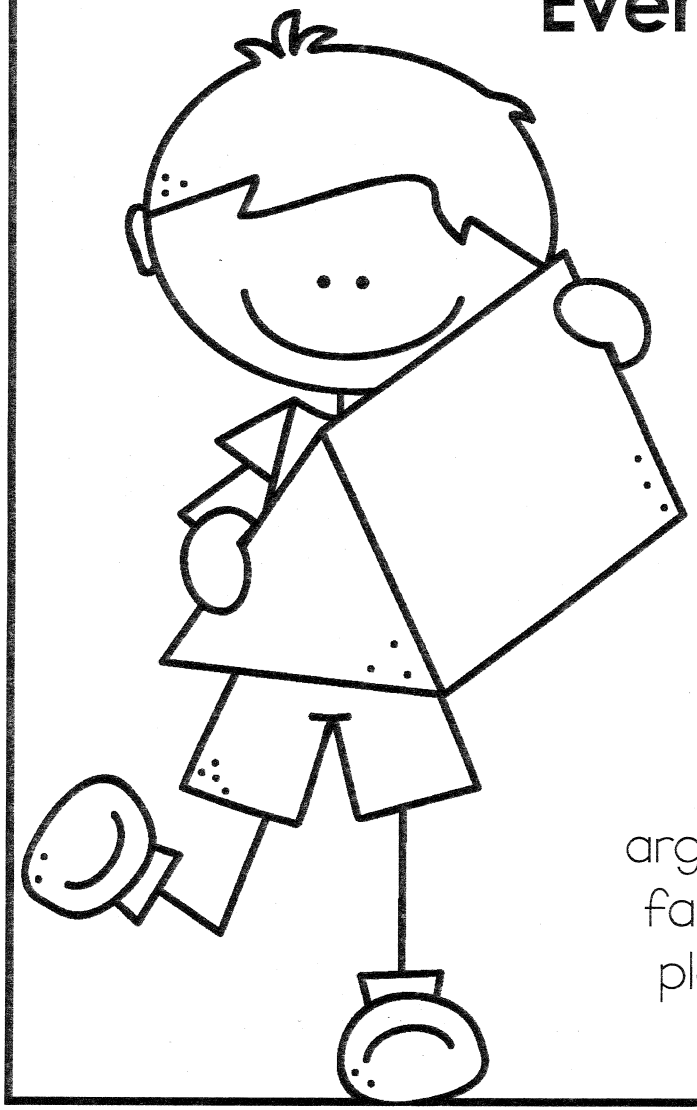
Grade 3

Everyday Math: Unit 



Multiplication & Division

Study Guide

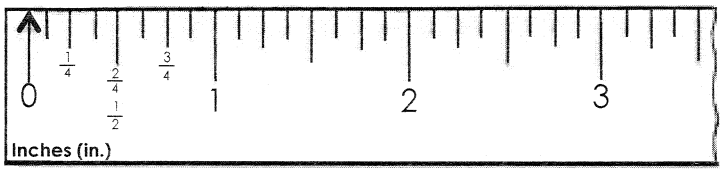
Unit Vocabulary:

argument, bases, conjecture, edge, extended facts, faces, factor pair, factors, multiple of 10, multiples, plot, polyhedron, prisms, products, 3-dimensional, 2-dimensional, vertex

Lesson 8.1:

How do you measure to the nearest 1/4 inch?

1.



a. Make a dot at 2 ½ inches from 0. Label it with the letter *A*.

b. Make a dot at 1¾ inches from 0. Label it with the letter *B*.

c. Make a dot at 1 ¼ inches from 0. Label it with the letter C.

2. Measure the line segment below to the nearest ¼ inch.

_____

about _____ in.

Lesson 8.2:

What strategies can be used to solve extended multiplication and division facts?

Write a helper fact and use it to help you solve.

a. 2 x 70 = _____

Fact I used to help:

_____

b. 40 x 5 = _____

Fact I used to help:

_____

c. 6 x 90 = _____

Fact I used to help:

_____

Use the helper fact to help you fill in the missing factors.

d. Helper fact: 9 x 2 = _____

90 x _____ = 180

e. Helper fact: _____ = 6 x 5

300 = _____ x 5

f. Helper fact: 5 x 5 = _____

_____ x 50 = 250

Lesson 8.3:

How do you identify factors of counting numbers?

Write in factor pairs to make the number sentences true.

_____ x _____ = 12 16 = _____ x _____ _____ x _____ = 30

Lesson 8.4:

How do you use clues to make conjectures and arguments to show if the statement is accurate?

1. There are 16 clowns marching in a parade. The clowns are supposed to march in rows with the same amount of clowns in each row. Find two different ways that the clowns can be arranged. Draw a sketch that shows each arrangement.

Sketch #1:	Sketch #2:

2. Which way is better? Explain your reasoning.

Lesson 8.5:

How do you find products for a given factor?

1. Here is a *Factor Bingo* game mat. You draw a 3 card.

   Circle at least two products with a factor of 3.

10	14	7	6	5
12	11	8	13	24
19	22	15	26	23
29	9	20	17	25
18	28	16	31	21

2. Here is a game mat for *Speed Factor Bingo*.

5	7	8	6	80
12	11	7	40	24
28	22	20	26	23
29	70	20	17	25
10	19	31	16	90

In *Speed Factor Bingo*, a player draws a card and covers all the products that have that number as a factor.

Name a factor card that would allow a player to get a bingo in one turn.

_____

Draw a line through the row, column, or diagonal to show the bingo.

Lesson 8.6:

How is money shared equally?

Four friends want to share $52. They have $10 bills and $1 bills. They can exchange larger bills for smaller bills if they need to. Write a number model. Use numbers or pictures to show how you solved the problem.

The letter _____ stands for _____

_____

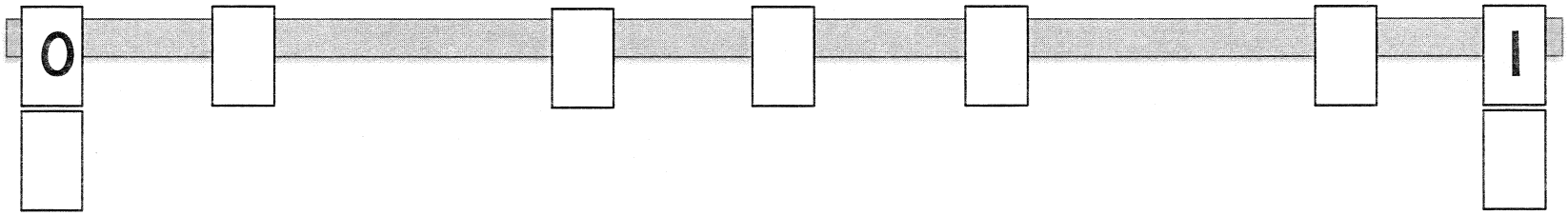
(number model with letter for unknown)

Answer: Each friend gets $ _____.

Lesson 8.7:

Exploration A: How do you plot fractions on a number line?

Plot the following fractions on the number line below. $\frac{3}{6}$ $\frac{0}{2}$ $\frac{6}{6}$ $\frac{1}{8}$ $\frac{7}{8}$ $\frac{1}{3}$ $\frac{2}{3}$

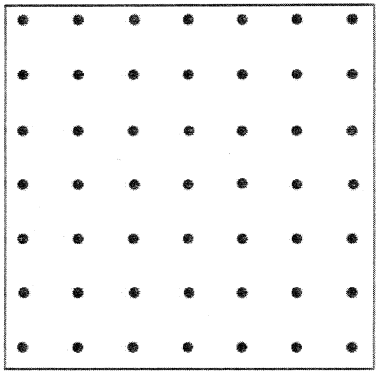


Exploration B: How do you construct a rectangle when given its area?

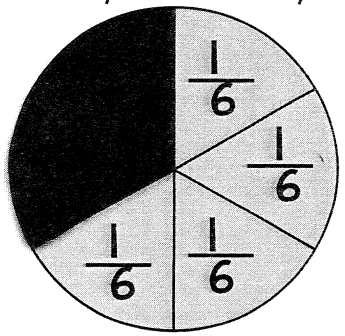
Construct a rectangle with an area of 12 square units.

What is the length of one side? _____ units

What is the length of the other side? _____ units



Exploration C: How do you identify equivalent fractions using fraction circles?



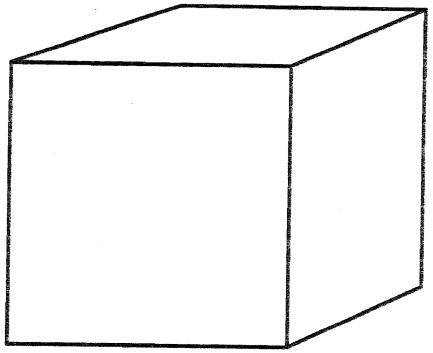
What fraction of the whole is missing? _____

$\frac{\square}{\square} = \frac{\square}{\square}$

Lesson 8.8:

How can you identify prisms given their attributes?

1. Explain why the shape in this picture is a cube.

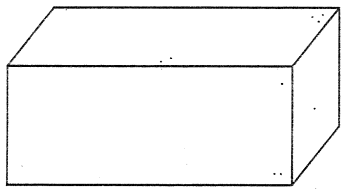


_____

_____

_____

2. Luke says this is a picture of a triangular prism.

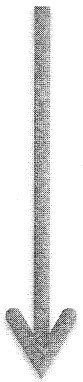


Explain why you agree or disagree?

_____

_____

ANSWER KEY

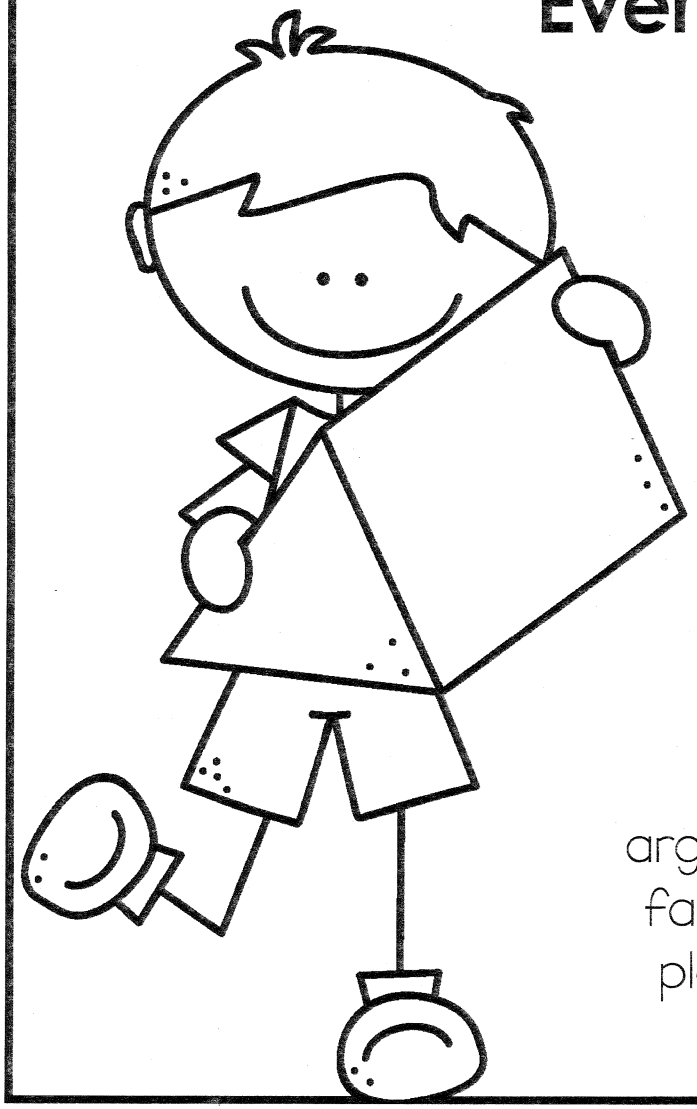


Name: ANSWER KEY

Test Date: ___ - ___ - ___

Grade 3

Everyday Math: Unit 8



Multiplication & Division

Study Guide

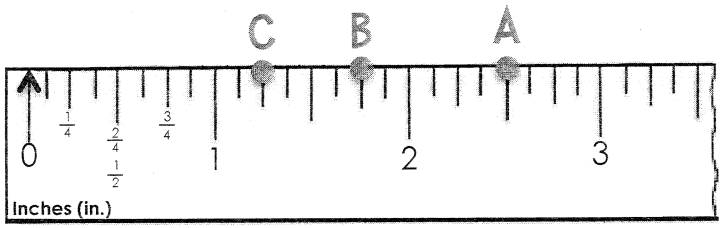
Unit Vocabulary:

argument, bases, conjecture, edge, extended facts, faces, factor pair, factors, multiple of 10, multiples, plot, polyhedron, prisms, products, 3-dimensional, 2-dimensional, vertex

Lesson 8.1:

How do you measure to the nearest 1/4 inch?

1.



a. Make a dot at 2 ½ inches from 0. Label it with the letter *A*.

b. Make a dot at 1¾ inches from 0. Label it with the letter *B*.

c. Make a dot at 1 ¼ inches from 0. Label it with the letter *C*.

2. Measure the line segment below to the nearest ¼ inch.

about 3 ¼ in.

Lesson 8.2:

What strategies can be used to solve extended multiplication and division facts?

Write a helper fact and use it to help you solve.

a. 2 x 70 = 140

Fact I used to help:

2 X 7 = 14

b. 40 x 5 = 200

Fact I used to help:

4 X 5 = 20

c. 6 x 90 = 540

Fact I used to help:

6 X 9 = 54

Use the helper fact to help you fill in the missing factors.

d. Helper fact: 9 x 2 = 18

90 x 2 = 180

e. Helper fact: 30 = 6 x 5

300 = 60 x 5

f. Helper fact: 5 x 5 = 25

5 x 50 = 250

Lesson 8.3:

How do you identify factors of counting numbers?

Write in factor pairs to make the number sentences true.

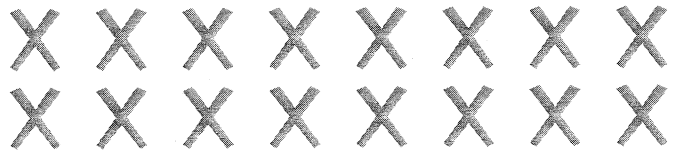
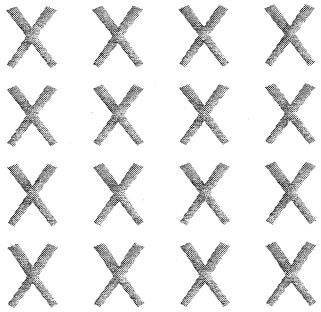
Answers will vary

_____ x _____ = 12 16 = _____ x _____ _____ x _____ = 30

Lesson 8.4:

How do you use clues to make conjectures and arguments to show if the statement is accurate?

1. There are 16 clowns marching in a parade. The clowns are supposed to march in rows with the same amount of clowns in each row. Find two different ways that the clowns can be arranged. Draw a sketch that shows each arrangement.

Sketch #1:	Sketch #2:
	

2. Which way is better. Explain your reasoning.

Answers will vary

Lesson 8.5:
How do you find products for a given factor?

1. Here is a *Factor Bingo* game mat. You draw a 3 card.
   Circle at least two products with a factor of 3.

10	14	7	6	5
12	11	8	13	24
19	22	15	26	23
29	9	20	17	25
18	28	16	31	21

2. Here is a game mat for *Speed Factor Bingo*.

5	7	8	6	~~80~~
12	11	7	~~40~~	24
28	22	~~20~~	26	23
29	~~70~~	20	17	25
~~10~~	19	31	16	90

In *Speed Factor Bingo*, a player draws a card and covers all the products that have that number as a factor.

Name a factor card that would allow a player to get a bingo in one turn.

5 or 10

Draw a line through the row, column, or diagonal to show the bingo.

Lesson 8.6:

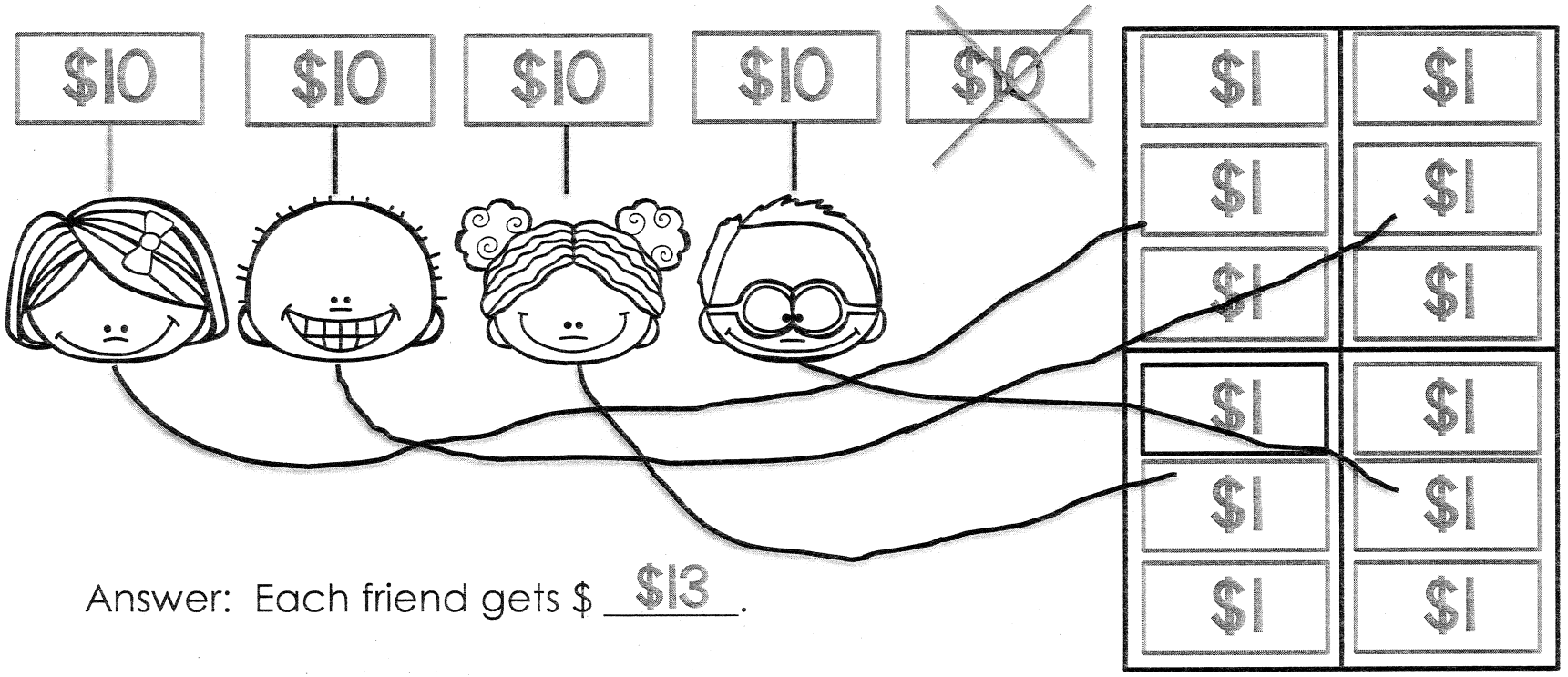
How is money shared equally?

Four friends want to share $52. They have $10 bills and $1 bills. They can exchange larger bills for smaller bills if they need to. Write a number model. Use numbers or pictures to show how you solved the problem.

The letter D stands for number of dollars each friend gets.

52 ÷ 4 = D or 4 X D = 52

(number model with letter for unknown)

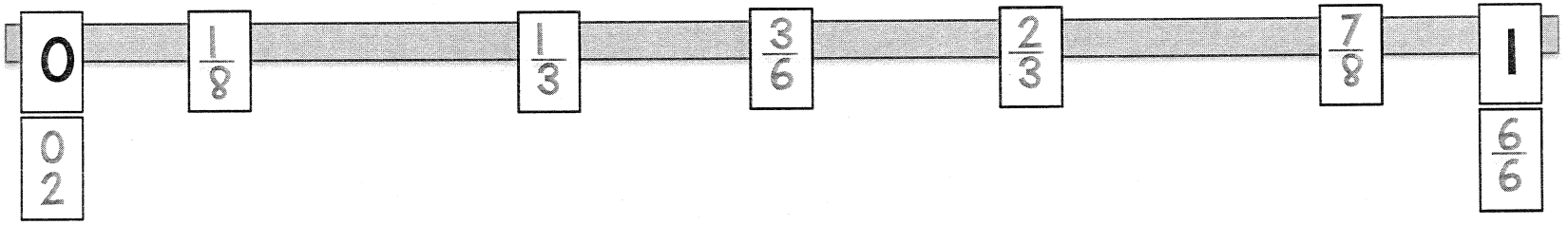


Answer: Each friend gets $ $13.

Lesson 8.7:

Exploration A: How do you plot fractions on a number line?

Plot the following fractions on the number line below. $\frac{3}{6}$ $\frac{0}{2}$ $\frac{6}{6}$ $\frac{1}{8}$ $\frac{7}{8}$ $\frac{1}{3}$ $\frac{2}{3}$

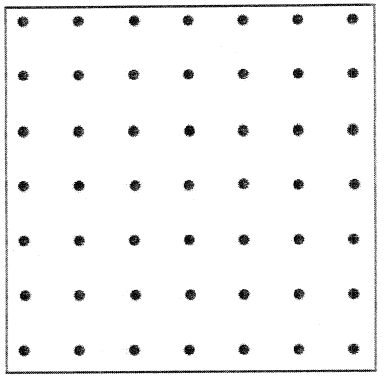


Exploration B: How do you construct a rectangle when given its area? Answers will vary

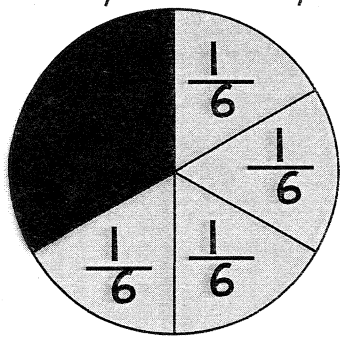
Construct a rectangle with an area of 12 square units.

What is the length of one side? _____ units

What is the length of the other side? _____ units



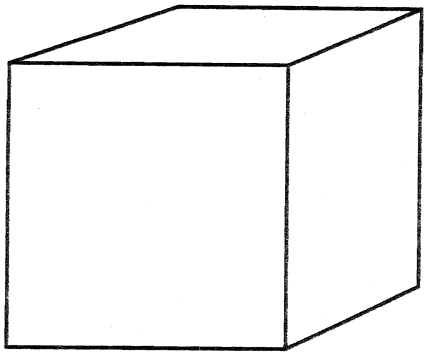
Exploration C: How do you identify equivalent fractions using fraction circles?



What fraction of the whole is missing? 2/6

$\frac{2}{6} = \frac{1}{3}$

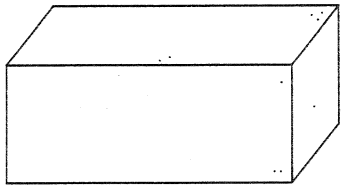
Lesson 8.8:
How can you identify prisms given their attributes?



1. Explain why the shape in this picture is a cube.

The shape of its bases are squares. That is why it is called a cube (or a rectangular prism).

2. Luke says this is a picture of a triangular prism.



Explain why you agree or disagree?

Sample answer: I disagree because its bases are rectangles.