SAMPLER

CRS Elementary Math

(College-Readiness Standards)

6 The 4th and 5th grade students at Oak Ridge Elementary share an outdoor recess area at the same time. The 4th graders like to play kickball. The 5th graders like to play soccer. Some 4th and 5th graders like to play chess. To keep the students safe, the school sets aside $\frac{1}{3}$ of the playground for kickball. Of the remaining playground area, $\frac{1}{4}$ is set aside for soccer.

A. Use the diagram below to show the fraction of the playground area set aside for soccer.

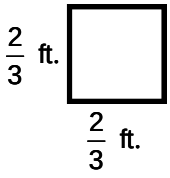
PLAYGROUND

B. Write an equation that shows the fraction of the playground area that is set aside for soccer.

Comprehensive Domain Review
Level E

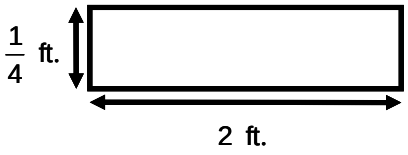
LEVEL E
Number and Operation - Fractions # 6

1. Find the area of the square below, in square feet.



Answer: ☐ square feet

2. Find the area of the rectangle below.



Answer: ☐ square feet

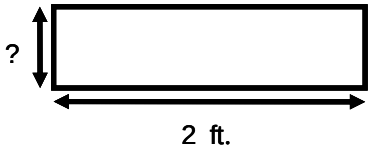
3. Complete the table below. Use the rule: $\times \frac{3}{4}$.

IN	1	2	3	4	5
OUT					

4. Complete the table below. Use the rule: $\div \frac{3}{4}$.

IN	$\frac{1}{3}$	$\frac{2}{3}$	1	4
OUT				

5. The perimeter of the rectangle is 5 feet. The length of rectangle is 2 feet. What is the width of the rectangle, in feet?



Answer: ☐ feet

Mathematical Modeling

MULTIPLYING DECIMALS (AREA MODEL)

Standard: Use concrete models or drawings to add, subtract, multiply, and divide decimals to hundredths. Explain reasoning.

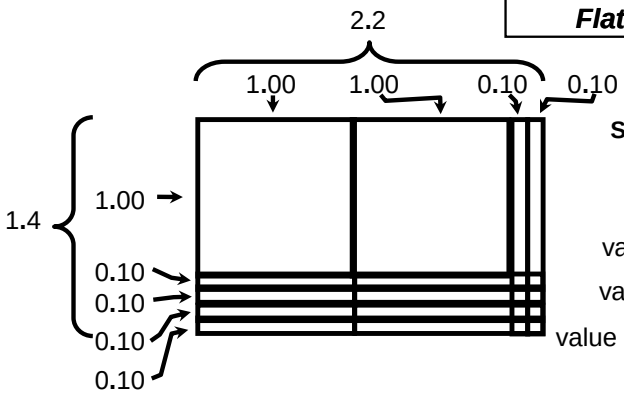
Example: $1.4 \times 2.2 =$

Step 1) The **width** of the ***area model*** (2.2) will be made of 2 **flats** and 2 **rods.**

Step 2) The **height** of the ***area model*** (1.4) will be made of 1 **flat** and 4 **rods**.

Area Model Key

	10 Rods = 1 Flat	*100 Squares = 1 Flat*
= 1.00 or = 1	= 0.10 or = 0.1	□ = 0.01
Flat	***Rod***	***Square***



Step 3) Count the number of **flats (2), rods (10), and squares (8).** Write out their values and find the **sum**.

value of **flats:** 2.00 **(2 groups of 1.0)**

value of **rods:** 1.00 **(10 groups of 0.10)**

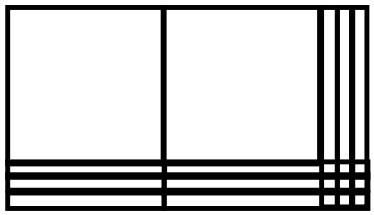
value of **squares:** + 0.08 **(8 groups of 0.01)**

sum: 3.08

Answer: 3.08

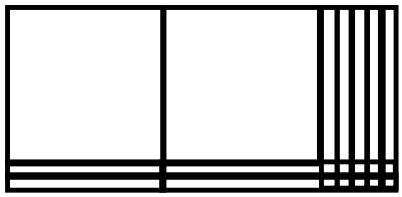
Use the models given to solve each equation.

1. $1.3 \times 2.3 =$



Answer: _____

2. $1.2 \times 2.5 =$



Answer: _____

Mathematical Modeling

MULTIPLYING DECIMALS (AREA MODEL)

Do Now

1. Find the product of 2.4 and 1.7 by using the ***area model***.

Answer: ____

2. Find the product of 2.7 and 1.4 by using the ***area model***.

Answer: ____

3. Find the product of 3.2 and 1.5 by using the ***area model***.

Answer: ____

4. Find the product of 3.5 and 1.2 by using the ***area model***.

Answer: ____

5. Find the product of 2.3 and 2.5 by using the ***area model***.

Answer: ____

SCORE: / 5 (%)

LEVEL E: *QUIK-PIK # 3*

1. Lionel donated 1,200 pairs of socks to a local charity.
   Each package of socks contained 24 pairs of socks.

   How many packages did he donate?

   Answer: ☐

---

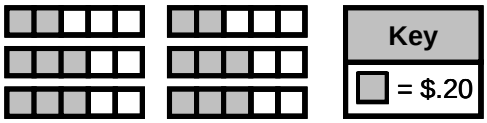
2. There are 3,770 students enrolled at Sota Springs High School.
   Each homeroom has 26 students.

   How many homerooms are there?

   Ⓐ 145 Ⓑ 125 Ⓒ 110 Ⓓ 98 Ⓔ 96

---

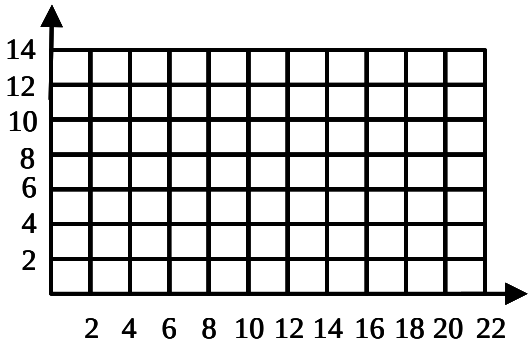
3. How much money is represented below, in dollars?



   Answer: ☐

---

4. a) Plot the following points on the coordinate grid: A (0,0) , B (10,0) , C (4,4) , D (8,4).



   b) Identify the shape. _____

---

5. Janae goes to the dance studio at 2:40 pm. She takes 3 classes back to back.

   They are each $1\frac{1}{2}$ hours long. What time should she finish dancing?

   Ⓐ 4:30 pm Ⓑ 5:40 pm Ⓒ 6:40 pm Ⓓ 7:10 pm Ⓔ 7:40 pm

LEVEL E: *QUIK-PIK # 5*

1. Janet sketches a rectangular prism on a poster board.
   The volume of the prism is 8800 cubic cm.
   The width of the prism is 22 cm and the height is 10 cm.

   a) Sketch the rectangular prism.

   b) What is the length of the rectangular prism, in centimeters?

   c) What is the length of the rectangular prism, in meters?

46 Victor completes $\frac{2}{9}$ of his work per hour.

What part of his work will he complete in 3 hours?

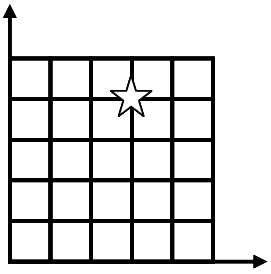
Ⓐ $\frac{2}{3}$ Ⓑ $\frac{1}{9}$ Ⓒ $\frac{5}{9}$ Ⓓ 3 Ⓔ 2

47 Charles had a sheet cake for his birthday. When $\frac{9}{12}$ of the cake remained, Charles took $\frac{1}{3}$ of the remaining cake to wrap and save for later.

What fraction of the original cake did he wrap?

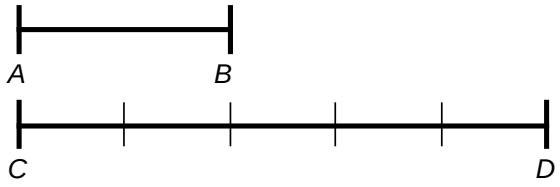
Ⓐ $\frac{1}{2}$ Ⓑ $\frac{1}{3}$ Ⓒ $\frac{1}{4}$ Ⓓ $\frac{2}{3}$ Ⓔ $\frac{3}{5}$

48 Identify the location of the ☆ on the coordinate plane below.



Ⓐ (4 , 3) Ⓑ (3 , 3) Ⓒ (4 , 4) Ⓓ (3 , 4) Ⓔ (4 , 5)

37) What portion of line segment $\overline{CD}$ is line segment $\overline{AB}$?



Ⓐ $\frac{1}{5}$ Ⓒ $\frac{2}{6}$

Ⓑ $\frac{1}{2}$ Ⓓ $\frac{3}{5}$ Ⓔ $\frac{2}{5}$

38) Which of the following fractions has the greatest value?

Ⓐ $\frac{4}{5}$ Ⓒ $\frac{7}{10}$

Ⓑ $\frac{6}{9}$ Ⓓ $\frac{4}{6}$ Ⓔ $\frac{2}{3}$

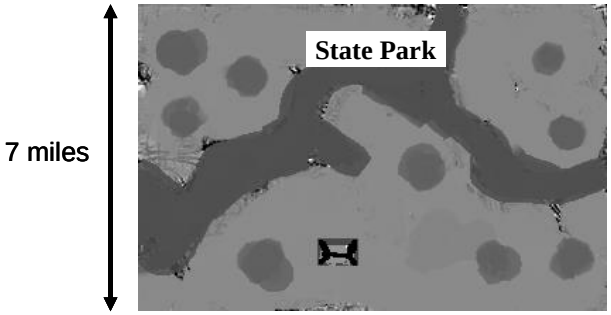
39) What is $\frac{16}{24}$ in simplest form?

Ⓐ $\frac{8}{12}$ Ⓒ $\frac{1}{3}$

Ⓑ $\frac{4}{6}$ Ⓓ $\frac{2}{3}$ Ⓔ $\frac{6}{8}$

Continue

6 The perimeter of the rectangular state park shown is 30 miles.



A worker estimates that there are 4 rabbits for every square mile in the park.

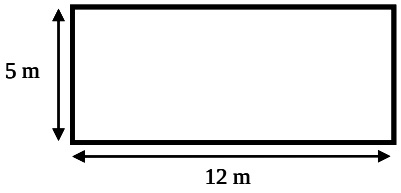
Given that this estimate is correct, what is the total number of rabbits in the park?

Explain and or show how you arrived at your answer.

Measurement and Data # 3

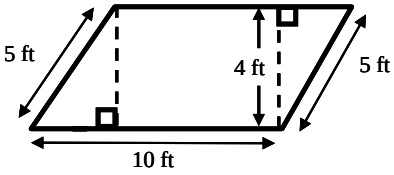
Use the diagrams below to find the total area of each figure.

1



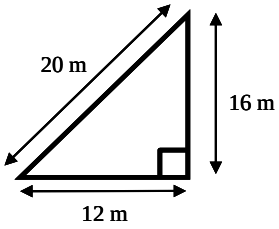
Ⓐ 17 m²
Ⓑ 34 m²
Ⓒ 48 m²
Ⓓ 50 m²
Ⓔ 60 m²

2



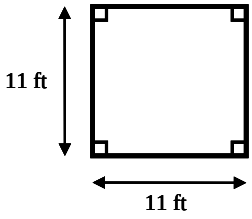
Ⓐ 30 ft²
Ⓑ 35 ft²
Ⓒ 40 ft²
Ⓓ 50 ft²
Ⓔ 60 ft²

3



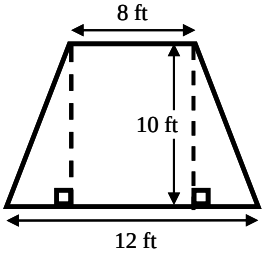
Ⓐ 48 m²
Ⓑ 64 m²
Ⓒ 78 m²
Ⓓ 96 m²
Ⓔ 192 m²

4



Answer: _____ ft²

5



Answer: _____ ft²

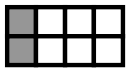
Mathematical Modeling

ADDING FRACTIONS (AREA MODEL)

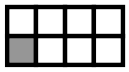
Standard: Understand addition and subtraction of fractions as joining or separating parts referring to the same whole. May use models.

Example 1: $\frac{2}{8} + \frac{1}{8} =$

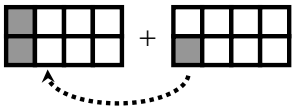
Step 1) Show $\frac{2}{8}$ using an **area model**.

$\frac{2}{8} =$ 

Step 2) Show $\frac{1}{8}$ using an **area model**.

$\frac{1}{8} =$ 

Step 3) Show $\frac{2}{8} + \frac{1}{8}$ using an **area model**.



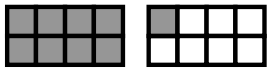
Step 4) The sum is 3 out of 8 pieces of the model shaded.

 $= \frac{3}{8}$

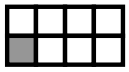
Answer: $\frac{3}{8}$

Example 2: $1\frac{1}{8} + \frac{1}{8} =$

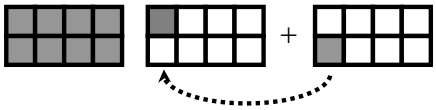
Step 1) Show $1\frac{1}{8}$ using an **area model.**

$1\frac{1}{8} =$ 

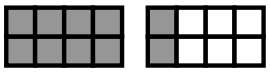
Step 2) Show $\frac{1}{8}$ using an **area model.**

$\frac{1}{8} =$ 

Step 3) Show $1\frac{1}{8} + \frac{1}{8}$ using an **area model**.

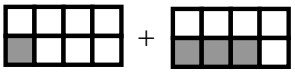


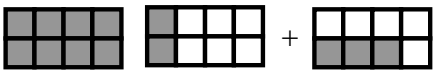
Step 4) The sum is the same as 1 whole and 2 out of 8 pieces of the model shaded.

 $= 1\frac{2}{8} = 1\frac{1}{4}$

Answer: $1\frac{1}{4}$

Use the **area model** to add the fractions below.

1. $\frac{1}{8} + \frac{3}{8}$;  Answer: ☐

2. $1\frac{2}{8} + \frac{3}{8}$;  Answer: ☐

Mathematical Modeling

ADDING FRACTIONS (AREA MODEL)

Do Now

Use the **area model** to add the fractions below.

1. $\frac{2}{3}+\frac{2}{3}=$

2. $\frac{2}{5}+\frac{4}{5}=$

3. $\frac{1}{4}+\frac{3}{4}=$

4. $2\frac{3}{5}+\frac{3}{5}=$

5. $7\frac{2}{8}+\frac{7}{8}=$

SCORE: / 5 (%)

LEVEL D: *QUIK-PIK # 3*

1. What number is missing in the number sentence below?

$43 \times 25 = (40 + 3) \times (20 + 5) = (40 \times 20) + (40 \times 5) + (3 \times ?) + (3 \times 5)$

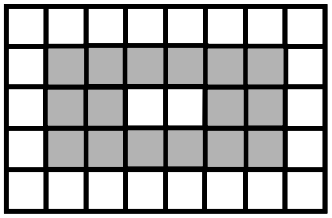
Answer: _____

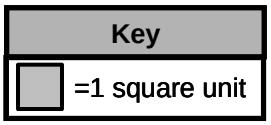
2. Kevin bought 25 bags of jelly beans with 325 jelly beans in each bag.
How many jelly beans did he buy?

Ⓐ 8,400 Ⓑ 8,750 Ⓒ 8,235 Ⓓ 8,125 Ⓔ 7,950

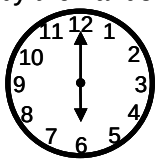
3. Find the area of the shaded region below.

Ⓐ 12 sq. units
Ⓑ 16 units
Ⓒ 16 sq. units
Ⓓ 18 sq. units
Ⓔ 20 units





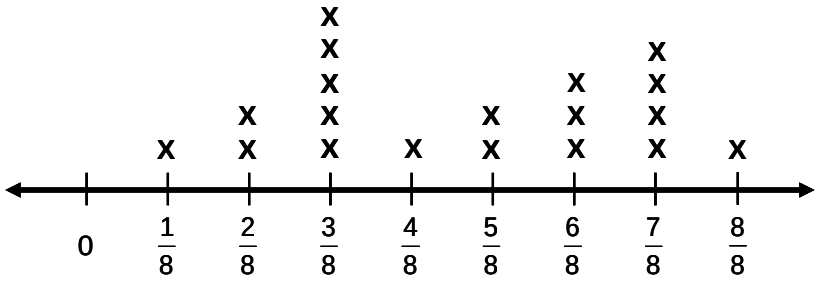
4. Name the type of angle formed by the hands of the clock below.



Ⓐ right angle Ⓑ acute angle Ⓒ obtuse angle Ⓓ straight angle Ⓔ equal angle

5. The line plot below shows the amount of water, in cups, used in an experiment by different lab groups.

Amount of Water Used by Lab Groups

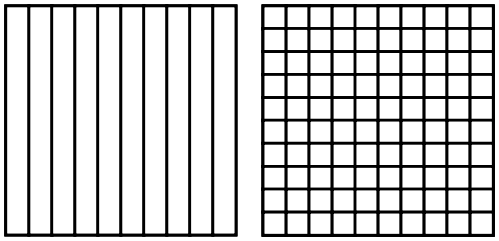


How many groups used $\frac{3}{4}$ cup of water?

Answer: _____

LEVEL D: *QUIK-PIK # 10*

1. a) Is $\frac{6}{10}$ equivalent to $\frac{60}{100}$? Use the congruent diagrams below to explain.



b) Complete the equation.

Fill in the missing value.

$\frac{3}{10} = \frac{?}{100}$? = ☐

c) Add. $\frac{7}{100} + \frac{2}{10} = \frac{?}{100}$? = ☐

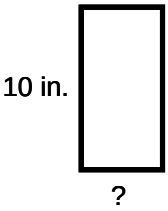
---

2. a) Find the length of tape needed to go around the frame below, in inches.
Select **all** that apply.

Note: Figure not drawn to scale.

Ⓐ 4 × 6 Ⓑ 24 Ⓒ 8 + 12 Ⓓ 20 Ⓔ 8 × 3

b) If the perimeter of the figure below is 36 inches, what is the width?



Note: Figure not drawn to scale.

Answer: ☐ inch(es)

12 Kara wants to find the product of 5,472 and 5. Her work is shown below.

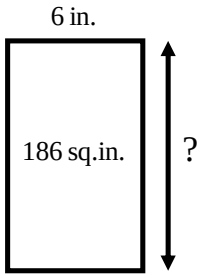
$$(5 \times 5{,}000) + (5 \times 400) + (5 \times 2)$$

What should she add to the expression?

A (5×700)
B (5×100)
C (5×10)
D (5×70)
E (5×7)

13 Isaiah drew a rectangle whose width is 6 inches and area is 186 square inches.

What is the length of the rectangle?



A 1116 sq. in.
B 31 sq. in.
C 31 in.
D 37 sq. in.
E 37 in.

Continue

37) Which expression is the same as $\frac{2}{9}$?

Ⓐ $\frac{1}{4}+\frac{1}{5}$ Ⓒ $\frac{1}{9}+\frac{1}{9}$

Ⓑ $\frac{1}{3}+\frac{2}{3}$ Ⓓ $\frac{1}{8}+\frac{1}{1}$ Ⓔ $\frac{1}{3}+\frac{3}{9}$

38) The product of 32 and 58 is about:

Ⓐ 1800 Ⓒ 1400
Ⓑ 1500 Ⓓ 800 Ⓔ 90

39) Joseph's father has 18 keyrings with 17 keys on each ring.

Which number sentence would you use to find how many keys Joseph's father has altogether?

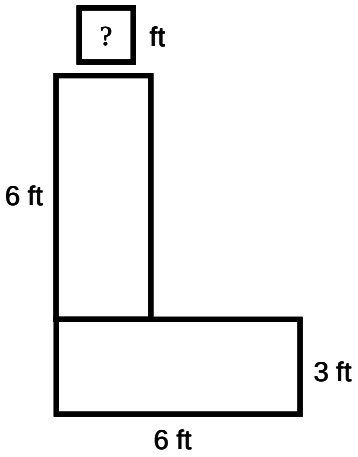
Ⓐ $18 \div 17 = \square$ Ⓒ $18 \times 17 = \square$

Ⓑ $18 + 17 = \square$ Ⓓ $18 - 17 = \square$ Ⓔ 18

Continue➡

LEVEL C: CRS COMPREHENSIVE PERFORMANCE TASKS

6 Jake wants to create the L-shaped design shown below. Both of the rectangles that make up the L-shaped design have the same area.



Note: Not drawn to scale.

A. What is the missing dimension, in feet, for the L-shaped design? Show your work.

B. What is the combined area of the L-shaped design? Show your work.

LEVEL C
Operations and Algebraic Thinking # 10

1. There are 28 people in a hospital emergency room. Each of the 4 nurses on duty will serve the same number of people. Which equation can be used to find the number of people each nurse will serve?

Ⓐ $28 \times 4 = \square$ Ⓑ $\square \times 4 = 28$ Ⓒ $\square \div 28 = 4$ Ⓓ $28 + 4 = \square$

2. Brenda has 48 playing cards. She will give the same number of cards to 6 people. Which equation can be used to find the number of cards each person will get?

Ⓐ $48 \times 6 = \square$ Ⓑ $\square \div 48 = 6$ Ⓒ $48 - 6 = \square$ Ⓓ $\square \times 6 = 48$

3. A group of 36 people are going on a tour. Each bench on the tour bus holds 4 people. Which equation can be used to find the number of benches that are needed to hold all 36 people?

Ⓐ $\square \times 4 = 36$ Ⓑ $36 \times 4 = \square$ Ⓒ $\square \div 36 = 4$ Ⓓ $36 - 4 = \square$

4. Demetrius has 4 pages of stamps with 8 stamps on each page.

Let $\square$ represent the total number of stamps he has.

Write four equations that can be used to find the total number of stamps he has.

_____ or _____ or _____ or _____

5. Amanda is making individual pizzas. She's making 6 pizzas with 7 slices of pepperoni on each pizza.

Let $\square$ represent the total number of pepperoni slices.

Write four equations that can be used to find the total number of pepperoni slices.

_____ or _____ or _____ or _____

Mathematical Modeling

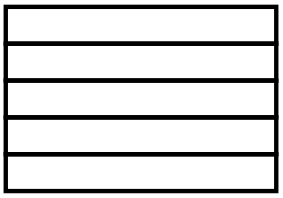
MULTIPLICATION (AREA MODEL)

Standard: Interpret products of whole numbers, e.g., interpret 5 × 7 as the total number of objects in 5 groups of 7 objects each.

Example: 5 × 7 =

Step 1) Make an **area model** that has **5** rows.

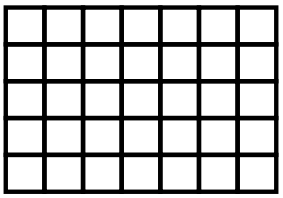
5 rows



Step 2) Place **7** squares inside each row.

7 squares per row

5 rows



= **35** squares

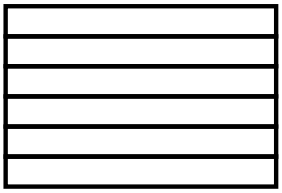
Step 3) To find the product of **5 and 7**, count the total number of squares.

Answer: 5 × 7 = 35

Use the **area model** to solve for the products below.

1. 6 × 3 =

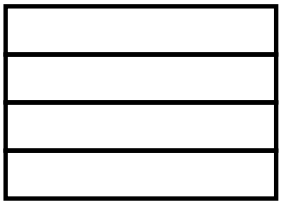
6 rows



Answer: _____

2. 4 × 8 =

4 rows



Answer: _____

Mathematical Modeling

MULTIPLICATION (AREA MODEL)

Do Now

Use the **area model** to solve for the products below.

1. $2 \times 3 =$

Answer: ____

2. $3 \times 7 =$

Answer: ____

3. $4 \times 3 =$

Answer: ____

4. $5 \times 8 =$

Answer: ____

5. $6 \times 4 =$

Answer: ____

SCORE: / 5 (%)

LEVEL C: *QUIK-PIK # 4*

1. There are 4 blue jars of marbles on a table. There are 3 marbles in each jar.

   Which expression below best represents the total number of marbles in the jars?

   Ⓐ 4 + 3
   Ⓑ 4 + 4 + 4 + 4
   Ⓒ 4 + 3 + 4 + 3
   Ⓓ 3 + 3 + 4
   Ⓔ 3 + 3 + 3 + 3

2. There are 36 students in the library. The same number of students sit at each of 9 tables. How many students are seated at each table?

   Ⓐ 3 Ⓑ 4 Ⓒ 6 Ⓓ 9 Ⓔ 45

3. Find the values below.

   a) 4 × 6 = ☐ e) 6 × 7 = ☐
   b) 6 × 6 = ☐ f) 4 × 9 = ☐
   c) 7 × 8 = ☐ g) 8 × 9 = ☐
   d) 8 × 8 = ☐ h) 7 × 7 = ☐

4. The quadrilaterals listed below all have opposite sides that are parallel except for which shape?

   Ⓐ square
   Ⓑ rectangle
   Ⓒ parallelogram
   Ⓓ trapezoid
   Ⓔ rhombus

5. The rectangle below has a perimeter of 24 meters. Its width is 4 meters.

   What is its length?

   4 m ☐

   Ⓐ 56 m Ⓑ 28 m Ⓒ 16 m Ⓓ 9 m Ⓔ 8 m

LEVEL C: *QUIK-PIK # 20*

The tally chart below shows the number of hours each person spent reading over the summer.

A) Complete the pictograph using the information below.

Summer Reading

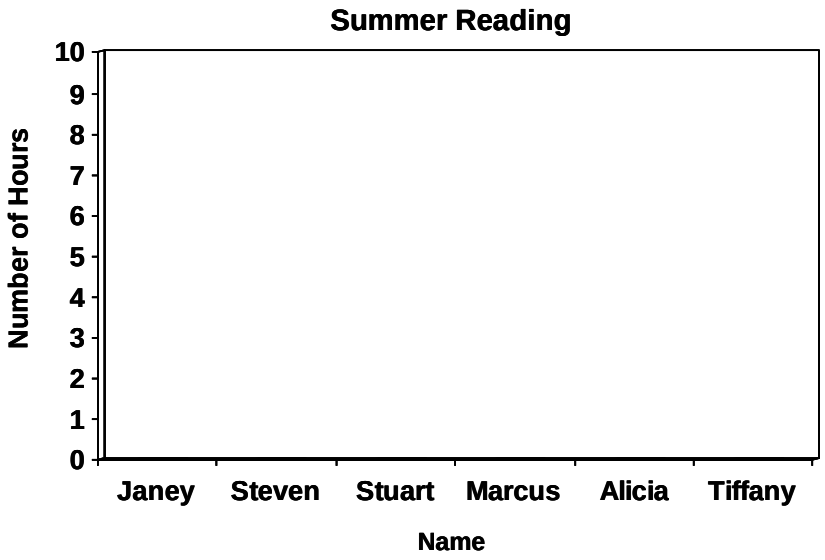
Name	Number of hours
Janey	𝍸 I
Steven	IIII
Stuart	II
Marcus	𝍸 III
Alicia	III
Tiffany	𝍸

Summer Reading

Name	Number of hours
Janey	
Steven	
Stuart	
Marcus	
Alicia	
Tiffany	

Key
○ = 2

B) Use the same information to create a bar graph.

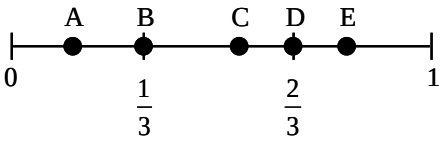


24 What number would make the number sentence correct?

$$(7 \times 5) + (23 \times 5) = (10 + \square) \times 5$$

Ⓐ 13
Ⓑ 17
Ⓒ 20
Ⓓ 21
Ⓔ 30

25 Which letter best shows $\frac{2}{6}$ on the number line below?



Ⓐ A
Ⓑ B
Ⓒ C
Ⓓ D
Ⓔ E

26 Linda swims four times as many laps as Carlos each day. Which number shows how many laps Linda swam on Thursday to complete the pattern?

Name	Mon	Tues	Wed	Thurs	Fri
Linda	4	8	12	?	20
Carlos	1	2	3	4	5

Ⓐ 13
Ⓑ 14
Ⓒ 15
Ⓓ 16
Ⓔ 24

39) Wanda mailed 9 international letters and 7 local letters.

Which number sentence could you use to show how many letters Wanda mailed altogether?

Ⓐ $9 \times 7 = \square$ Ⓒ $9 - 7 = \square$

Ⓑ $9 + 7 = \square$ Ⓓ $63 \div 9 = \square$ Ⓔ 97

40) Mike has 3 pockets on his jacket. He has 9 coins in each pocket.

Which number sentence shows how many coins he has altogether?

Ⓐ $3 + 9 = \square$ Ⓒ $3 \times 9 = \square$

Ⓑ $3 + \square = 9$ Ⓓ $9 \div 3 = \square$ Ⓔ 39

41) There are 6 homes sold each day.

At this rate, how many homes will be sold in 8 days?

Ⓐ 14 Ⓒ 48

Ⓑ 32 Ⓓ 64 Ⓔ 68

42) An apple cost 54¢.

At this rate, how much will 9 apples cost?

Ⓐ $4.86 Ⓒ $5.46

Ⓑ $5.41 Ⓓ $5.31 Ⓔ $0.06

Continue ➡

MATH BUILD-UP # 17
PRIME/COMPOSITE NUMBERS

Composite Number: A whole number that has **more than two (2)** factors.

Example: 4, 21, and 30 are composite numbers.

Prime Number: A whole number that has **only two (2)** factors, **1** and **itself**.

Example: 3, 5, and 17 are prime numbers.

Anchors℠: 1) The numbers **0** and **1** are neither **prime** nor **composite**.
2) All **Even** numbers are **composite** except for **0** and **2**.
3) **Not** All **Odd** numbers are **prime**!

1) In your own words, what is a **prime number**? Give **4** examples of prime numbers below.

Prime Numbers:_____

2) What are the first 4 prime numbers? Prime Numbers:_____

3) List **all** the prime numbers from 0 to 22. Prime Numbers:_____

4) List **all** the prime numbers from 24 to 49. Prime Numbers:_____

5) Ms. Sanchez, our favorite math club coach, wrote the following numbers on the board.

Which set contains **all** prime numbers?

Ⓐ (1, 3, 5, 7) Ⓑ (0, 3, 11, 13) Ⓒ (2, 11, 13, 51) Ⓓ (3, 7, 13, 63) Ⓔ (2, 7, 11, 29)

6) Mr. Prism, our math instructor, wrote the following numbers on the board.

Which set contains **all** prime numbers?

Ⓐ (1, 3, 5, 9) Ⓑ (0, 3, 11, 15) Ⓒ (2, 21, 13, 51) Ⓓ (3, 7, 13, 61) Ⓔ (2, 7, 11, 33)

7) In your own words, what is a **composite number**? Give **4** examples of composite numbers below.

Composite Numbers:_____

8) List **all** the composite numbers from 0 to 37. Composite Numbers:_____

9) Ms. Trapez, the math club expert, wrote a set of numbers on a flipchart.

Which set contains **all** composite numbers?

Ⓐ (2, 6, 8, 10) Ⓑ (20, 18, 16, 0) Ⓒ (4, 9, 51, 57) Ⓓ (16, 18, 37, 46) Ⓔ (5, 7, 17, 37)

10) Which set below contains 2 composite numbers and 2 prime numbers?

Ⓐ (3, 6, 8, 10) Ⓑ (39, 28, 16, 0) Ⓒ (4, 9, 51, 58) Ⓓ (26, 37, 41, 51) Ⓔ (5, 7, 27, 37)

SCORE: /10 (%)

pREview

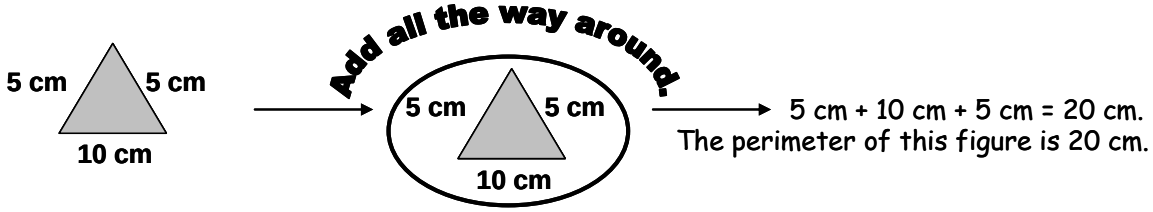
G
Geometry and Measurement

Concept: Perimeter **Grade Cluster: 3-5**

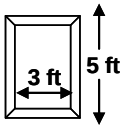
Definition: The total distance around a figure.

Hook(s)/Quik-Pt(s): 1. add **P e r i m e t e r**

2. Remember to go "all the way around" the figure to calculate perimeter.



Example: Bob and his friends are building a treehouse. The door on the tree house will be 3 ft by 5 ft. What will be the perimeter of the door?



a) 8 ft b) 15 ft c) 16 ft d) 28 ft

Workspace: P = 2L + 2W = L + L + W + W; (5 + 5 + 3 + 3 = 16 ft)

Answer: **c)** 16 ft

Key Components

EDA's supplemental instructional materials are standards-based and designed to provide information to facilitate teacher planning, confirm student mastery, and prepare students to be successful on high-stakes assessments.

Our highly-effective supplemental materials include:

- **Results & Researched-based Practices/Strategies**
- **Ongoing Assessment and Monitoring Systems**
- **Comprehensive Student Achievement Data Analyses**
- **Curriculum Integration Plans / Curriculum Maps**
- **Professional Development for School Administrators and Teachers**
- **In-class Demonstrations / Instructional Modeling**
- **Instructional Exchange Sessions / Data Review Sessions**
- **Process-Embedded Supplemental Materials**
- **Interactive Parental Workshops**