

Operations and Algebraic Thinking

- 1 Ian counted 5 turtles each on 3 logs. Write a multiplication expression to represent the total number of turtles.

$$5 \times 3 \text{ or } 3 \times 5$$

- 2 Marcus arranged 10 action figures in 2 rows. Write a division expression to represent the number of action figures in each row.

$$10 \div 2$$

Write an equation and solve the problem.

Show your work.

- 3 Annie arranged 4 books each on 3 different shelves. How many books are there altogether?

$$\text{Possible equation: } 3 \times 4 = b, b = 12; 12 \text{ books}$$

- 4 Workers planted a total of 27 trees. They planted the same number in each of 9 parks. How many trees did the workers plant in each park?

$$\text{Possible equation: } 27 \div 9 = t, t = 3; 3 \text{ trees}$$

Complete the equation.

5 $32 \div \boxed{4} = 8$

6 $6 \times 2 = 2 \times \boxed{6}$

7 $5 \times 9 = (5 \times 4) + (\underline{5 \times 5})$

- 8 Write and solve a multiplication equation with an unknown to find the answer.

Show your work.

$$21 \div n = 7$$

Possible equation: $n \times 7 = 21, n = 3$

- 9 Tim wants to divide 56 trading cards equally among 8 friends. He writes this division equation to solve the problem.

$$56 \div 8 = n$$

Write and solve a related multiplication equation to find the number of cards Tim gives each friend.

$n \times 8 = 56$ or $8 \times n = 56, n = 7; 7$ cards

- 10 Multiply.

$$6 \times 7 = \underline{42}$$

- 11 Kate has 3 bags of balloons. There are 10 balloons in each bag. Kate gives each of 5 friends an equal number of balloons. What is the greatest number of balloons that each friend could get?

6 balloons

- 12 Complete the pattern.

$$6 \times 2 = 12$$

$$7 \times 2 = 14$$

$$8 \times 2 = 16$$

$$9 \times 2 = \underline{18}$$

Number and Operations in Base Ten

- 13 Patel has 86 marbles. Round the number of marbles to the nearest ten.

90

- 14 There are 136 children on the playground. Round the number of children to the nearest hundred.

100

- 15 Jasmine had 187 rocks in her collection. She buys 18 more at a rock store. How many rocks does Jasmine have now?

Show your work.

205 rocks

- 16 Carson makes 32 ounces of trail mix using peanuts, sunflower seeds, and raisins. He uses 12 ounces of peanuts and 14 ounces of sunflower seeds. How many ounces of raisins are in the mix?

$$12 + 14 + r = 32$$

6 ounces of raisins

- 17 There are 346 bicycles and 287 pairs of inline skates for rent at a beach shop. How many more bicycles than pairs of inline skates can be rented?

Show your work.

59 more bicycles

- 18 Hannah buys 3 boxes of sidewalk chalk. There are 10 sticks of chalk in a box. How many sticks of chalk does she buy altogether?

30 sticks

- 19 Jin collects miniature animals. He has 5 boxes with 40 animals in each box. How many miniature animals does Jin have in all?

200 miniature animals

- 20 Tessa bought 9 books of mazes. There are 50 mazes in each book. How many mazes are there altogether? Use the equation to solve.

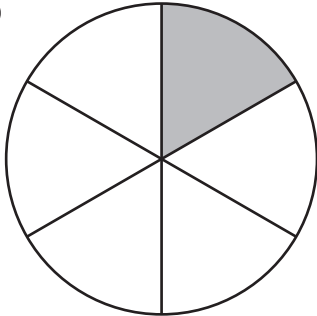
$$9 \times 50 = (9 \times 5) \times 10$$

450 mazes

Number and Operations—Fractions

What fraction does the shaded part of the model represent?

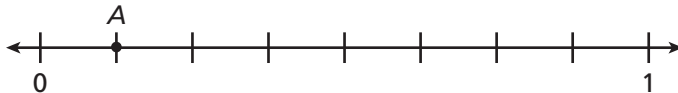
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 $\frac{1}{6}$

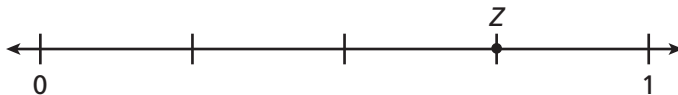
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 $\frac{3}{8}$

23 What fraction is represented by Point A on the number line?


 $\frac{1}{8}$

24 What fraction is represented by Point Z on the number line?


 $\frac{3}{4}$

25 Jeri and Loren are making doll clothes. Jeri uses $\frac{4}{6}$ yard of fabric. Loren uses $\frac{2}{3}$ yard. Compare the amounts of fabric they use.



Possible answer: The amounts of fabric are

equivalent: $\frac{4}{6}$ yard = $\frac{2}{3}$ yard.

- 26 Kyle, Rami, Isabel, and Sam are reading the same history book. Kyle has read $\frac{3}{4}$ of the book, Rami has read $\frac{2}{3}$, Isabel has read $\frac{6}{8}$, and Sam has read $\frac{5}{6}$. Which two friends have read the same number of pages? Explain.

Show your work.

Possible answer: Kyle and Isabel; $\frac{3}{4}$ and $\frac{6}{8}$ are

equivalent fractions.

- 27 Write three fractions equivalent to $\frac{1}{2}$.

Possible answer: $\frac{2}{4}$, $\frac{3}{6}$, and $\frac{4}{8}$

- 28 Write the number 8 as a fraction.

Possible answer: $\frac{8}{1}$

- 29 Jackie uses $\frac{3}{4}$ of a pound of cheddar and $\frac{3}{8}$ of a pound of pepper jack cheese for sandwiches. Does Jackie use more cheddar or more pepper jack cheese? How do you know?

cheddar; Possible explanation: 3 out of 4 parts of a whole is a greater portion than 3 out of 8 parts of the same whole.

- 30 Shane swims laps for $\frac{3}{4}$ of an hour. Gabriela swims laps for $\frac{2}{3}$ of an hour. Compare the amounts of time. Use $<$, $>$, or $=$.

Possible answer: $\frac{3}{4}$ of an hour $>$ $\frac{2}{3}$ of an hour

Measurement and Data

Solve.

- 31** Kaitlin started her guitar lesson at 1:15 P.M. The lesson lasted 55 minutes. Then it took 30 minutes for Kaitlin to return home after her lesson. What time did Kaitlin get home?

2:40 P.M.

- 32** Ricardo started his baseball game at 3:35 P.M. and finished at 4:50 P.M. He played catcher for 35 minutes and shortstop for the rest of the time. How long did Ricardo play shortstop?

40 minutes

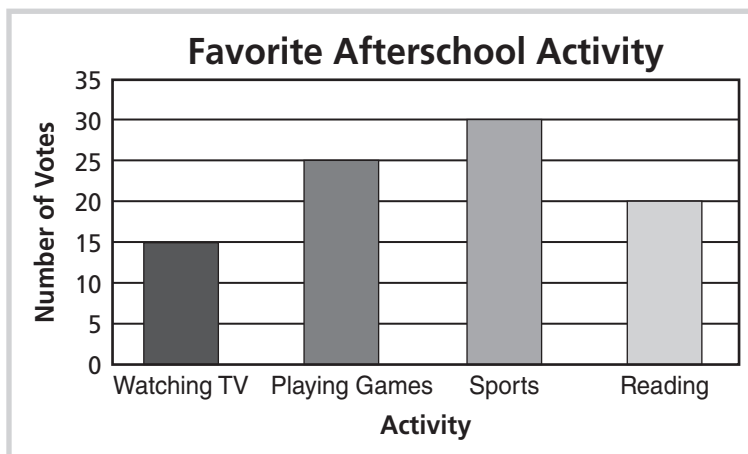
- 33** Omar buys bananas and oranges for a fruit salad. The mass of the bananas is 245 grams. The mass of the oranges is 410 grams. What is the total mass of the fruit?

655 grams

- 34** Mikayla has 8 beakers to use for her science project. Her first step is to pour 6 fluid ounces of water into each beaker. How many fluid ounces of water does Mikayla pour?

48 fluid ounces

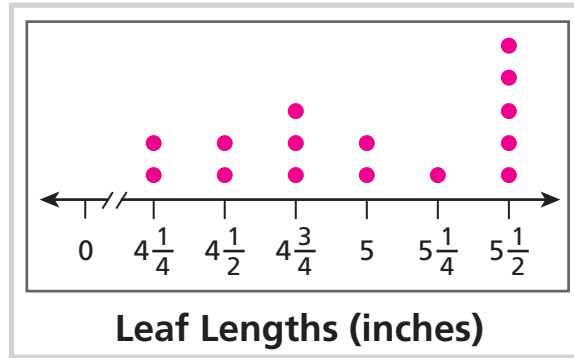
- 35** The bar graph shows the results of a survey on favorite afterschool activities. How many more votes did playing games and sports combined get than watching TV and reading combined?



20 more votes

- 36 The frequency table shows the lengths of leaves fourth graders collected and measured. Complete the line plot.

Frequency Table	
Leaf Lengths (inches)	Number of Leaves
$4\frac{1}{4}$	2
$4\frac{1}{2}$	2
$4\frac{3}{4}$	3
5	2
$5\frac{1}{4}$	1
$5\frac{1}{2}$	5



- 37 Derek wants to find the area of a postcard in inches. How can Derek use 1-inch squares to find its area?

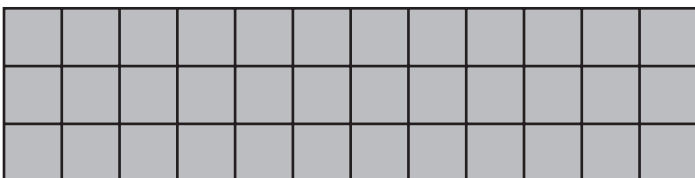
Possible answer: He can use 1-inch squares to cover the postcard without gaps or overlaps. Then he can count the number of unit squares.

- 38 Ava covers a piece of construction paper with unit squares. What is the area of the construction paper?



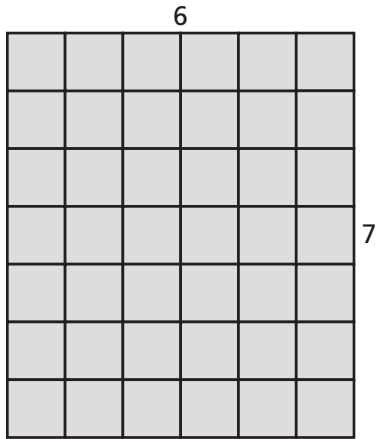
20 square units

- 39 Each unit square in the rectangle is one square centimeter. What is the area of the rectangle?



36 square centimeters

- 40 What is the area of the rectangle?

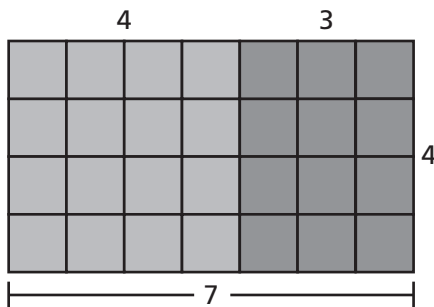


42 square units

- 41 Juliana wants to cover the front of her book with fabric. The side lengths of the front cover are 8 inches and 9 inches. How much fabric does she need?

72 square inches

- 42 Find the area of the large rectangle by finding the areas of the two small rectangles and adding them.



Possible equation:

$$(4 \times 4) + (4 \times 3) = 16 + 12 = 28;$$

28 square units

- 43 A ranger wants to combine two rectangular campsites into one. One campsite is 9 feet long and 7 feet wide. The other campsite is 8 feet long and 7 feet wide. What will be the area of the new campsite?

119 square feet

- 44 Keiji puts painter's tape around the baseboards of his living room. The side lengths of the floor of the rectangular room are 16 feet and 18 feet. How much painter's tape did Keiji use?

68 feet

- 45 The perimeter of a triangular sign is 70 inches. Two of the sides are 24 inches each. What is the length of the unknown side?

22 inches

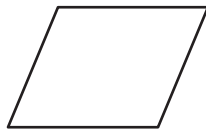
Geometry

- 46 Look at the names of figures in the box. Write the names of the figures that have four sides.

quadrilateral	square	triangle
rectangle	rhombus	parallelogram

quadrilateral, rectangle, square, rhombus, parallelogram

- 47 To what larger categories do all of these figures belong?



Possible answer: quadrilateral and parallelogram

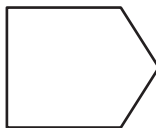
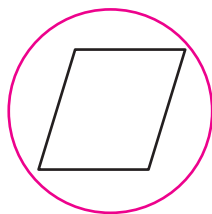
- 48 Look at the names of figures in the box. Write all of the names that describe this figure.



quadrilateral	triangle	rectangle	square
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quadrilateral, rectangle, square

- 49 Look at the figures. Circle the figure that is a quadrilateral.



- 50 Emily draws a figure that is a quadrilateral but is **not** a rhombus, rectangle, or square. Circle the figure Emily drew.

