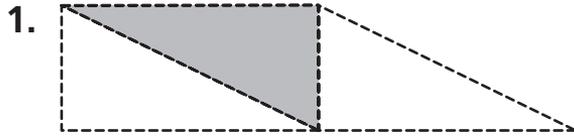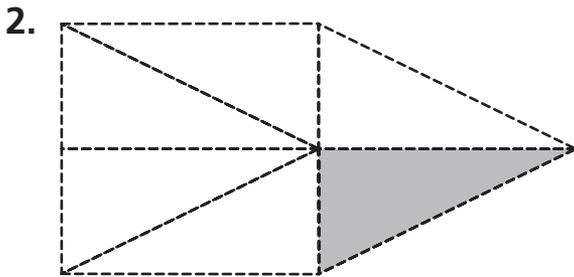The triangles in the shapes all have the same area. Count the equal parts in the whole. What unit fraction of the whole is the shaded triangle?

1.
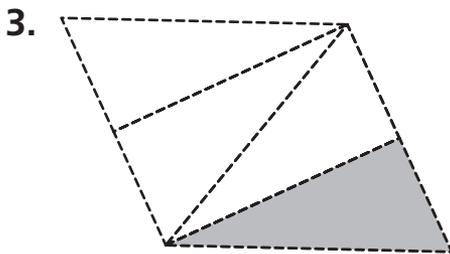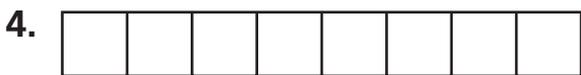
There are _____ equal parts in the whole shape.

The shaded triangle is _____ of the whole shape.

2.

There are _____ equal parts in the whole shape.

The shaded triangle is _____ of the whole shape.

3.

There are _____ equal parts in the whole shape.

The shaded triangle is _____ of the whole shape.

Write a sum to represent the part of the fraction bar that you shaded. Then write it as one fraction.

4.

Divide the whole into 8 equal parts.

$\frac{1}{8} + \frac{1}{8} + \frac{1}{8} + \frac{1}{8} + \frac{1}{8} + \frac{1}{8} + \frac{1}{8} + \frac{1}{8}$
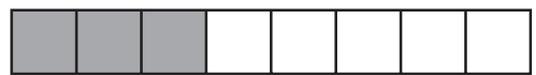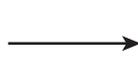
Shade 3 parts.

$\frac{1}{8} + \frac{1}{8} + \frac{1}{8} = \frac{3}{8}$

5.

Divide the whole into 5 equal parts.

Shade 4 parts.

6.
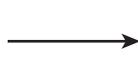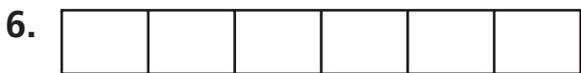
Divide the whole into 6 equal parts.
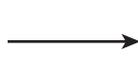
Shade 2 parts.

Remembering

Draw a Math Mountain and write an equation to solve each problem.

Show your work.

1. **Take From** Kate brings 15 muffins to the bake sale. She sells 9. How many muffins does she have now?

   _____

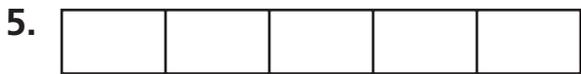2. **Put Together** Ryan has 8 large stickers and 4 small stickers. How many stickers does Ryan have altogether?

   _____

Read each sentence and write whether it is *true* or *false*.

3. All parallelograms are rectangles. _____

4. All parallelograms are quadrilaterals. _____

5. Draw a parallelogram with no right angles.
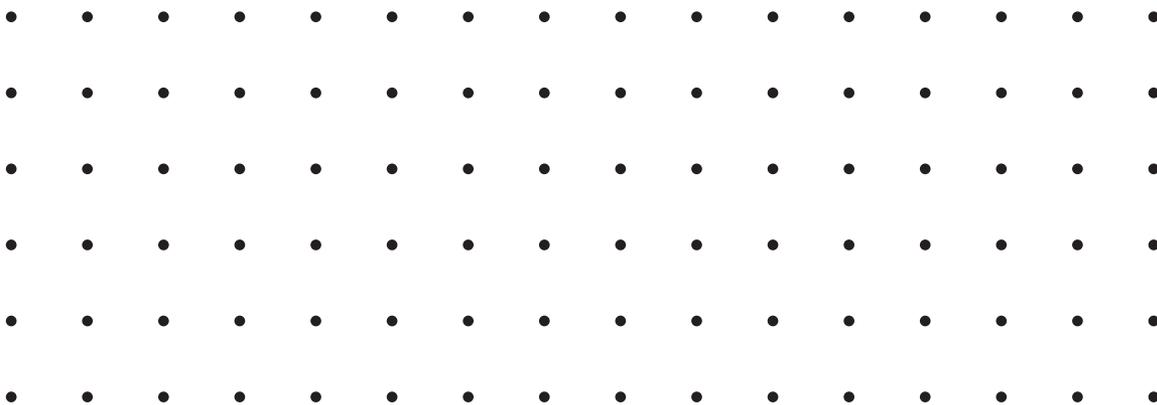
6. **Stretch Your Thinking** Cameron eats $\frac{1}{3}$ of his granola bar before school and another $\frac{1}{3}$ of the granola bar for lunch. Draw and shade a fraction bar to show how much of the granola bar Cameron has eaten.

Homework

Shade each fraction bar to show the fraction. First, divide the fraction bar into the correct unit fractions.

1. $\frac{1}{4}$

├───────────────── 1 Whole ─────────────────┤

2. $\frac{2}{6}$

├───────────────── 1 Whole ─────────────────┤

3. $\frac{5}{8}$

├───────────────── 1 Whole ─────────────────┤
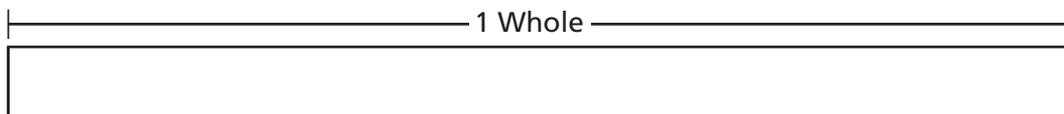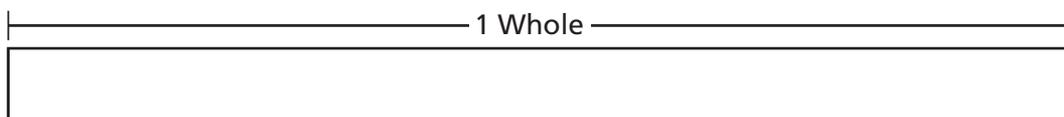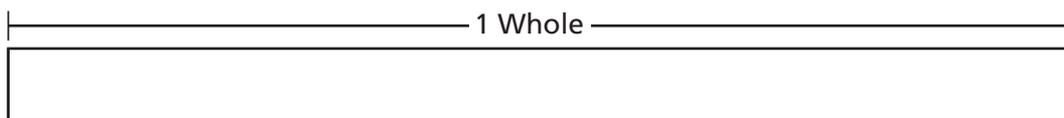
Mark each number line to show the fraction. First, divide the number line into the correct unit fractions.

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

0 ←───────────────────────────────→ 1

5. $\frac{3}{4}$

0 ←───────────────────────────────→ 1

6. $\frac{5}{6}$

0 ←───────────────────────────────→ 1
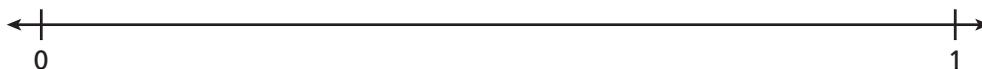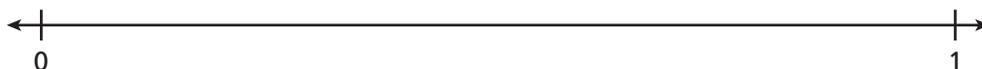
Solve each problem. Label your answers.   _Show your work._

1. Chen has $8. She earns some more money babysitting. Now she has $17. How much money does she earn for babysitting?

_____

2. Dylan has 48 baseball cards. He puts 8 cards on each album page. How many album pages does he fill with baseball cards?

_____

Look at the angles below.
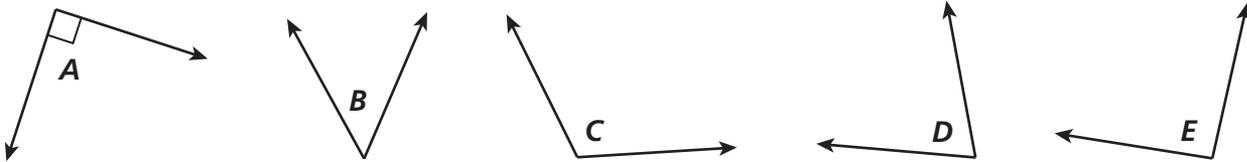
3. Which angles are smaller than a right angle? _____

Write a sum to represent the part of the fraction bar that you shaded. Then write it as one fraction.

4.
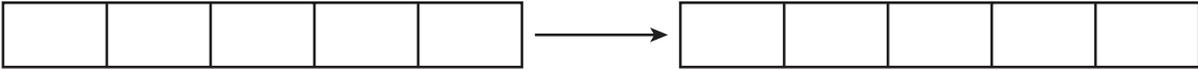
Divide the whole into 5 equal parts   Shade 3 parts

_____

5. Stretch Your Thinking Write a word problem to match the shaded fraction bar.

1 Whole

_____

_____

Model Fractions
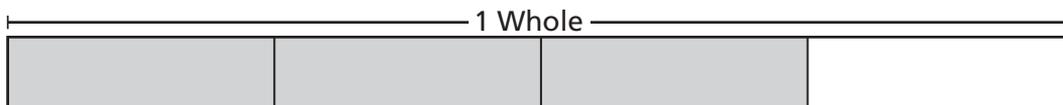
Locate each fraction less than 1 on the number line.

1. $\frac{1}{3}$

0 ————————————————————————— 1

2. $\frac{1}{6}$

0 ————————————————————————— 1

3. $\frac{1}{4}$ and $\frac{7}{8}$

0 ————————————————————————— 1
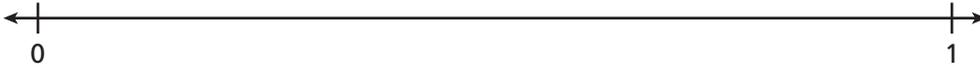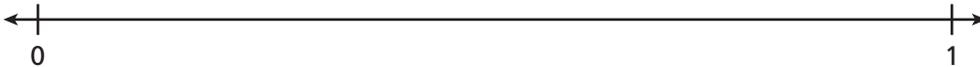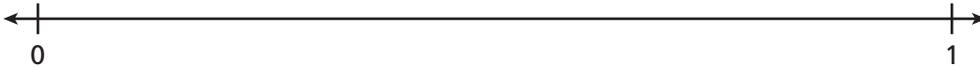
Locate each fraction greater than 1 on the number line.

4. $\frac{7}{4}$

0 —————————— 1 —————————— 2

5. $\frac{4}{1}$

0 — 1 — 2 — 3 — 4 — 5 — 6 — 7 — 8 — 9 — 10

6. $\frac{6}{3}$
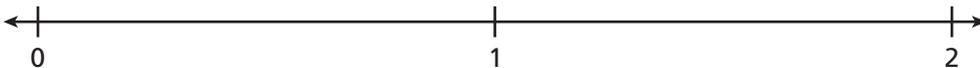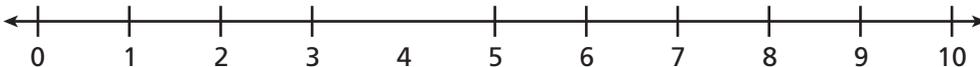
0 —————— 1 —————— 2 —————— 3

7. Explain how you located one of the fractions from Exercises 4–6.

_____

_____

_____

Name _____ **Date** _____

Remembering

Solve each problem. Label your answers.

1. Aisha packs 40 books for the media center. She puts the same number of books into 8 boxes. How many books did she put in each box?

_____

Draw the figure.

2. Draw a quadrilateral that is *not* a rectangle.

**Mark the number line to show the fraction. First, divide the number line into the correct unit fractions.**

3. $\frac{2}{6}$

```
←+――――――――――――――――――+→
 0                    1
```

4. Stretch Your Thinking Use the numbers 3 and 4 to make a fraction that is greater than 1 and a fraction that is less than 1. Explain how you made your fractions without a number line.

_____

_____

_____

_____

_____

_____

Homework

| 1 | 1 |

| $\frac{1}{2}$ | $\frac{1}{2}$ | $\frac{2}{2}$ |

| $\frac{1}{3}$ | $\frac{1}{3}$ | $\frac{1}{3}$ | $\frac{3}{3}$ |

| $\frac{1}{4}$ | $\frac{1}{4}$ | $\frac{1}{4}$ | $\frac{1}{4}$ | $\frac{4}{4}$ |

| $\frac{1}{5}$ | $\frac{1}{5}$ | $\frac{1}{5}$ | $\frac{1}{5}$ | $\frac{1}{5}$ | $\frac{5}{5}$ |

| $\frac{1}{6}$ | $\frac{1}{6}$ | $\frac{1}{6}$ | $\frac{1}{6}$ | $\frac{1}{6}$ | $\frac{1}{6}$ | $\frac{6}{6}$ |

| $\frac{1}{7}$ | $\frac{1}{7}$ | $\frac{1}{7}$ | $\frac{1}{7}$ | $\frac{1}{7}$ | $\frac{1}{7}$ | $\frac{1}{7}$ | $\frac{7}{7}$ |

| $\frac{1}{8}$ | $\frac{1}{8}$ | $\frac{1}{8}$ | $\frac{1}{8}$ | $\frac{1}{8}$ | $\frac{1}{8}$ | $\frac{1}{8}$ | $\frac{1}{8}$ | $\frac{8}{8}$ |

Use the diagram. Write < or > to compare the unit fractions.

1. $\frac{1}{3} \bigcirc \frac{1}{7}$ **2.** $\frac{1}{3} \bigcirc \frac{1}{2}$ **3.** $\frac{1}{6} \bigcirc \frac{1}{7}$

4. $\frac{1}{2} \bigcirc \frac{1}{4}$ **5.** $\frac{1}{5} \bigcirc \frac{1}{3}$ **6.** $\frac{1}{4} \bigcirc \frac{1}{7}$

7. $\frac{1}{8} \bigcirc \frac{1}{7}$ **8.** $\frac{1}{6} \bigcirc \frac{1}{2}$ **9.** $\frac{1}{3} \bigcirc \frac{1}{8}$

10. $\frac{1}{8} \bigcirc \frac{1}{4}$ **11.** $\frac{1}{5} \bigcirc \frac{1}{2}$ **12.** $\frac{1}{5} \bigcirc \frac{1}{8}$

13. $\frac{1}{6} \bigcirc \frac{1}{3}$ **14.** $\frac{1}{4} \bigcirc \frac{1}{5}$ **15.** $\frac{1}{6} \bigcirc \frac{1}{5}$

16. $\frac{1}{5} \bigcirc \frac{1}{7}$ **17.** $\frac{1}{4} \bigcirc \frac{1}{3}$ **18.** $\frac{1}{2} \bigcirc \frac{1}{7}$

19. $\frac{1}{8} \bigcirc \frac{1}{6}$ **20.** $\frac{1}{2} \bigcirc \frac{1}{8}$ **21.** $\frac{1}{6} \bigcirc \frac{1}{4}$

Remembering

Solve each problem. Label your answers.   *Show your work.*

1. Jennifer has 12 stamps. After she puts
one stamp on each invitation, she has 3 left.
How many invitations have stamps?

_____

2. Michael played 15 songs. He played 13 fewer songs
than Landon. How many songs did Landon play?

_____

**Draw each rectangle on the dot paper. Find the
perimeter and area.**

3. A rectangle 4 cm long and 2 cm
wide.

. . . .

. . . .

. . . .

. . . .

. . . .
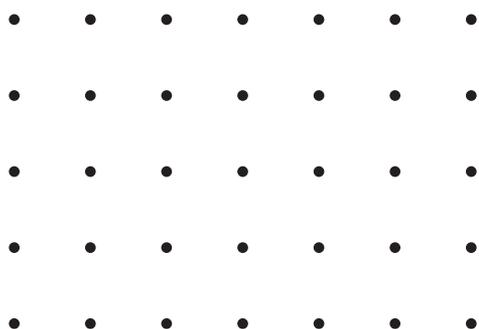
Perimeter _____

Area _____

4. A rectangle 4 cm long and 4 cm
wide.

. . . .

. . . .

. . . .

. . . .

. . . .
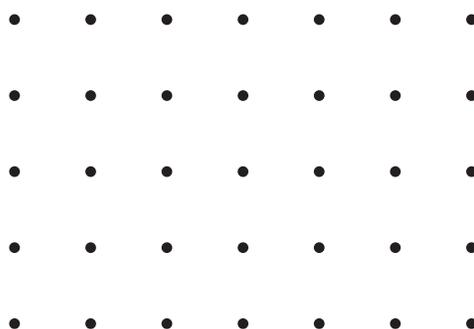
Perimeter _____

Area _____

Locate the fraction less than 1 on the number line.

5. $\frac{2}{3}$

0 |—————————————————————————| 1

6. Stretch Your Thinking Zane says that $\frac{1}{8}$ is greater than
$\frac{1}{4}$ because 8 is greater than 4. Do you agree? Explain.

_____

_____

_____

Compare. Use <, >, or =.

1. $\frac{3}{4}$ ☐ $\frac{3}{8}$ 2. $\frac{2}{6}$ ☐ $\frac{2}{5}$ 3. $\frac{5}{7}$ ☐ $\frac{2}{7}$ 4. $\frac{1}{6}$ ☐ $\frac{1}{8}$

5. $\frac{5}{8}$ ☐ $\frac{3}{8}$ 6. $\frac{4}{6}$ ☐ $\frac{5}{6}$ 7. $\frac{4}{4}$ ☐ $\frac{3}{3}$ 8. $\frac{3}{5}$ ☐ $\frac{3}{8}$

9. $\frac{3}{4}$ ☐ $\frac{2}{3}$ 10. $\frac{2}{4}$ ☐ $\frac{4}{4}$ 11. $\frac{5}{7}$ ☐ $\frac{5}{8}$ 12. $\frac{3}{3}$ ☐ $\frac{4}{4}$

13. $\frac{8}{8}$ ☐ $\frac{6}{8}$ 14. $\frac{8}{8}$ ☐ $\frac{6}{6}$ 15. $\frac{8}{6}$ ☐ $\frac{5}{6}$ 16. $\frac{4}{8}$ ☐ $\frac{6}{8}$

Solve.   *Show your work.*

17. Selena got 5 out of 6 answers correct on her science quiz. Her friend Ana got 4 answers out of 6 correct on her science quiz. Which friend answered a greater fraction of the questions correctly?

    _____

18. Jay ate $\frac{2}{3}$ of a pepperoni pizza. Darrell ate $\frac{2}{4}$ of a mushroom pizza. If the pizza pans are the same size, who ate a greater fraction of a whole pizza?

    _____

Name _____ **Date** _____

Remembering

Read each problem. Cross out any extra information or circle the hidden information. Then solve.

Show your work.

1. Jordan keeps track of rainy days for one year. This year he counted 27 weeks with at least 1 rainy day. How many weeks had no rainy days?

   _____

2. Claudia scores 275 points on a video game. Hannah scores 268 points on the same video game. The high score for the same game is 306. How many points did the girls score in all?

   _____

Find the unknown side length in each diagram.

3.

9 in.
?
Area = 72 sq in.

_____

4.

14 ft
?
Perimeter = 60 ft

_____
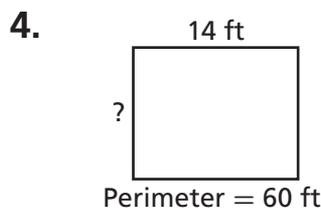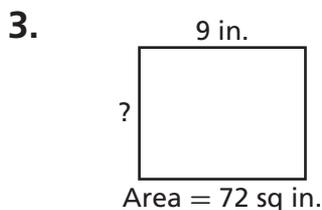
Use the diagram. Write $<$ or $>$ to compare the unit fractions.

5. $\dfrac{1}{3} \bigcirc \dfrac{1}{5}$

6. $\dfrac{1}{6} \bigcirc \dfrac{1}{4}$

7. $\dfrac{1}{3} \bigcirc \dfrac{1}{6}$

8. $\dfrac{1}{5} \bigcirc \dfrac{1}{2}$

1						1
$\frac{1}{2}$			$\frac{1}{2}$			$\frac{2}{2}$
$\frac{1}{3}$		$\frac{1}{3}$		$\frac{1}{3}$		$\frac{3}{3}$
$\frac{1}{4}$	$\frac{1}{4}$		$\frac{1}{4}$		$\frac{1}{4}$	$\frac{4}{4}$
$\frac{1}{5}$	$\frac{1}{5}$	$\frac{1}{5}$	$\frac{1}{5}$		$\frac{1}{5}$	$\frac{5}{5}$
$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{6}{6}$
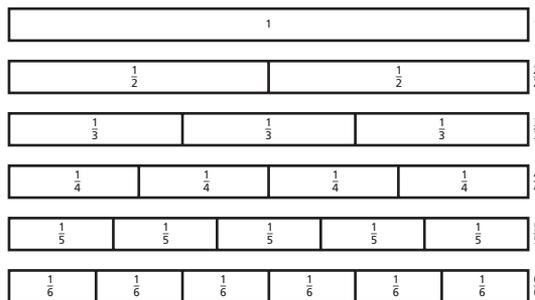
9. **Stretch Your Thinking** Lauren, Amanda, and Cami each buy the same size pizza. Cami eats $\dfrac{1}{2}$ of her pizza. Amanda eats less than Cami. Lauren eats more than Cami. Write two fractions for both Amanda and Lauren to show how much pizza the girls eat.

   _____

Compare Fractions

Use your fraction strips for Exercises 1–6. Fill in the blanks.

1. How many eighths are in one fourth? _____

Complete these equations:

_____ eighths = 1 fourth $\dfrac{\square}{8} = \dfrac{1}{4}$

2. How many fourths are in one half? _____

Complete these equations:

_____ fourths = 1 half $\dfrac{\square}{4} = \dfrac{1}{2}$

3. How many eighths are in three fourths? _____

Complete these equations:

_____ eighths = 3 fourths $\dfrac{\square}{8} = \dfrac{3}{4}$

4. How many sixths are in two thirds? _____

Complete these equations:

_____ sixths = 2 thirds $\dfrac{\square}{6} = \dfrac{2}{3}$

5. How many sixths are in one half? _____

Complete these equations:

_____ sixths = 1 half $\dfrac{\square}{6} = \dfrac{1}{2}$

6. Find three other pairs of equivalent fractions.

_____   _____   _____

Name _____ **Date** _____

Remembering

Multiply or divide.

1. $5 \times 4 =$ _____

2. $7 \times 7 =$ _____

3. $32 \div 8 =$ _____

4. $45 \div 5 =$ _____

5. $9 \times 6 =$ _____

6. $42 \div 6 =$ _____

Complete.

7. On a centimeter dot grid, draw all the possible rectangles with a perimeter of 14 cm and sides whose lengths are whole centimeters. Label the lengths of two adjacent sides of each rectangle.

8. Find and label the area of each rectangle. Then complete the table.

Rectangles with Perimeter 14 cm	
Lengths of Two Adjacent Sides	Area

Compare. Use <, >, or =.

9. $\frac{1}{3}$ ☐ $\frac{2}{7}$

10. $\frac{3}{6}$ ☐ $\frac{2}{5}$

11. $\frac{4}{6}$ ☐ $\frac{6}{6}$

12. $\frac{4}{8}$ ☐ $\frac{2}{4}$

13. $\frac{4}{6}$ ☐ $\frac{4}{7}$

14. $\frac{2}{5}$ ☐ $\frac{4}{5}$

15. $\frac{3}{6}$ ☐ $\frac{7}{8}$
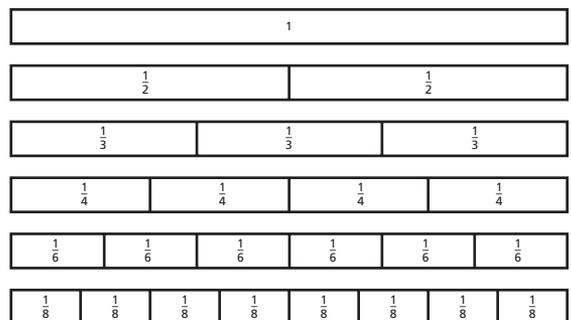
16. $\frac{3}{5}$ ☐ $\frac{3}{7}$

17. $\frac{2}{6}$ ☐ $\frac{4}{8}$

18. $\frac{3}{3}$ ☐ $\frac{5}{5}$

19. $\frac{5}{4}$ ☐ $\frac{2}{4}$

20. $\frac{5}{6}$ ☐ $\frac{5}{4}$

21. Stretch Your Thinking Use 4, 6, and 8 as denominators, and write six equivalent fractions.

_____

_____

1								1
$\frac{1}{2}$				$\frac{1}{2}$				$\frac{2}{2}$
$\frac{1}{3}$		$\frac{1}{3}$			$\frac{1}{3}$			$\frac{3}{3}$
$\frac{1}{4}$		$\frac{1}{4}$		$\frac{1}{4}$		$\frac{1}{4}$		$\frac{4}{4}$
$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$		$\frac{1}{6}$		$\frac{6}{6}$
$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{8}{8}$

Introduce Equivalence

1. Complete each number line. Show all fractions including each fraction for 1.

0 ————————|———————— 1
$\frac{1}{2}$

0 ————|———————————— 1
$\frac{1}{3}$

0 ——|—————————————— 1
$\frac{1}{4}$

0 —|——————————————— 1
$\frac{1}{6}$

0 |———————————————— 1
$\frac{1}{8}$
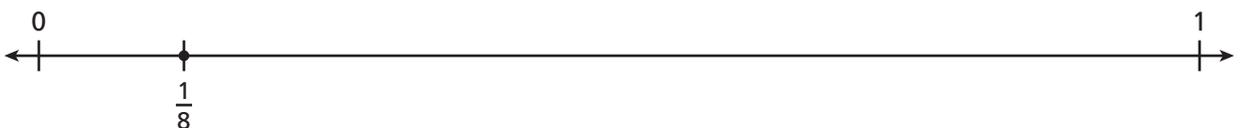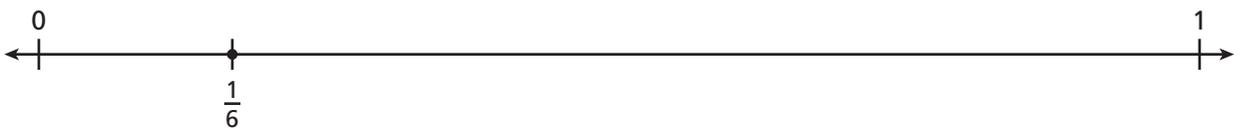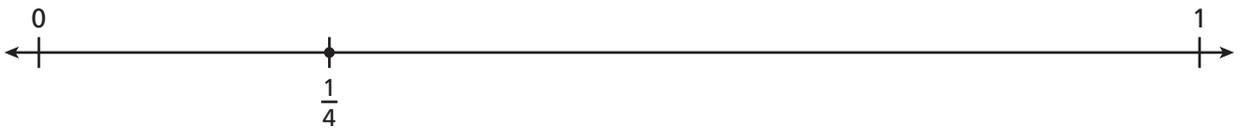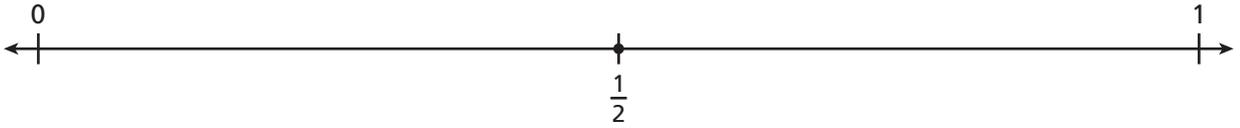
Use your number lines. Write an equivalence chain.

2. With fractions that equal $\frac{1}{2}$

_____

3. With fractions that equal $\frac{3}{4}$

_____

4. With fractions that equal $\frac{6}{6}$

_____

Solve each problem. Label your answers.   *Show your work.*

1. Mrs. Garcia has 15 pencils in a cup. 7 students take a pencil from the cup to use in class. Mrs. Garcia puts 3 more pencils in the cup. How many pencils are in the cup now?

   _____

2. Matthew buys 13 baseball cards. His dad buys him 5 more. Then Matthew gives his brother 6 cards. How many cards does Matthew have now?

   _____

**Decompose the figure into rectangles.
Then find the area of the figure.**

3.

   _____

Use your fraction strips for Exercise 4. Fill in the blanks.

4. How many sixths are in one third? _____

   Complete these equations:

   _____ sixths = 1 third $\dfrac{\Box}{6} = \dfrac{1}{3}$

5. **Stretch Your Thinking** Look at the fractions.

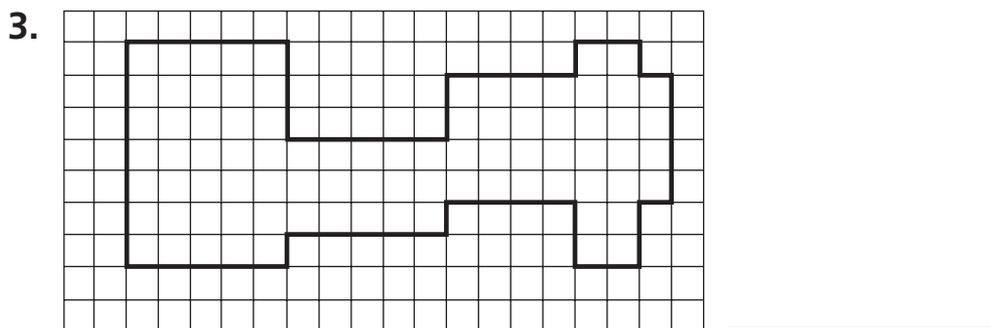 $\dfrac{1}{2}$ $\dfrac{2}{4}$ $\dfrac{3}{6}$ $\dfrac{4}{8}$

   Explain the relationship between the numerator and the denominator. Write a different fraction equivalent to $\dfrac{1}{2}$.

   _____

   _____

Solve. Draw diagrams or number lines if it helps.   *Show your work.*

1. Jack buys $\frac{4}{3}$ pounds of plums. Martin buys $\frac{6}{3}$ pounds of apples. Who buys more fruit? Explain your answer.

   _____

   _____

2. May runs $\frac{10}{4}$ miles every day after school. Beth says that she runs farther than May every day because she runs $\frac{5}{2}$ miles every day after school. Is her statement correct? Explain your answer.

   _____

   _____

3. Bess has knitted $\frac{5}{8}$ of the scarf she is making. Has she knitted more than $\frac{1}{2}$ of the scarf? *Hint*: Find an equivalent fraction in eighths for $\frac{1}{2}$.

   _____

   _____

4. Bert used $\frac{7}{8}$ foot of an oak board to make a tray. Akio made his tray from $\frac{4}{4}$ foot of the same oak board. Who used more wood? How do you know?

   _____

   _____

5. A bottle of orange juice holds $\frac{4}{6}$ quart of juice. A bottle of pineapple juice holds $\frac{2}{3}$ quart of juice. Which bottle has more juice? How do you know?

   _____

   _____

The table shows the number of each type of book
sold on Monday and Tuesday at the book sale.

Book Sales

|	Fiction	Nonfiction	Used
Monday	223	166	92
Tuesday	137	257	88

1. On Monday, how many more
nonfiction and used books are
sold than fiction books?

2. How many books were sold on
Tuesday?

_____

_____

Solve. Draw a diagram to represent the situation.

3. Rachel has 20 one-inch beads. She wants to use
all of them to make a square picture frame. What
will be the length of each side?

Perimeter   Area   Side Length

_____

**Complete the number line. Show all fractions including
the fraction for 1.**

4.

0   1

$\frac{1}{6}$
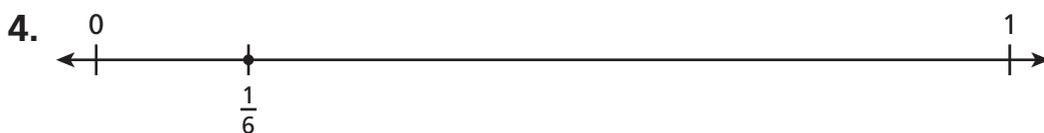
5. Stretch Your Thinking Christine and Alan each buy
the same size sandwich. Christine eats $\frac{3}{4}$ of her
sandwich. Alan eats more of his sandwich than
Christine. Use a different denominator to show
how much of the sandwich Alan might have eaten.

_____

Problem Solving with Fractions

Homework

Complete.

1. Fold a sheet of paper in half. Open the paper and shade one part. Write a fraction for the shaded part.

_____

2. Refold the paper along the same line. Fold it in half again. Write a fraction for the part you think is shaded.

_____

3. Refold the paper along the same lines. Fold it in half one more time. Write a fraction for the part you think is shaded.

_____

4. Unfold the paper to check.

5. Write an equivalence chain using the fractions that name the shaded part of the paper.

_____

6. Write another fraction that is equivalent to $\frac{1}{2}$.

_____

7. What 3 fractions can you write for the whole?

_____

Remembering

For 1–2, write an equation and solve the problem.   *Show your work.*

1. Brittany places 6 glasses on each of 8 tables. Then she puts 5 more glasses on one of the tables. How many glasses did she put on the tables altogether?

   _____

2. Eric has 34 toy cars. He gives 4 toy cars to his little brother. Then Eric puts an equal number of his toy cars in 5 bags. How many toy cars are in each bag?

   _____

3. Use the tangram pieces to make shapes. Choose one shape and copy it on a separate sheet of paper. Find the area of the shape you made. Remember, the square is one square inch.

   _____

Solve. Draw diagrams or number lines if it helps.   *Show your work.*

4. John uses $\frac{8}{6}$ ounces of milk for his recipe. Mya uses $\frac{4}{3}$ ounces of milk for her recipe. Who uses more milk? Explain your answer.

   _____

5. Keisha's box weighs $\frac{5}{4}$ pounds. Dylan's box weighs $\frac{7}{4}$ pounds. Whose box weighs more?

   _____

6. **Stretch Your Thinking** How many times would you fold a sheet of paper in half to have eighths? Explain.

   _____

   _____

   _____

Focus on Mathematical Practices