



Mathematics

Grade 3

10-15 minutes
per day

Understanding of Multiplication Models

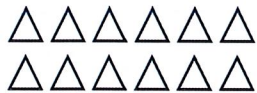
Name: _____

- 1** Show 3×5 by drawing equal groups of 5.

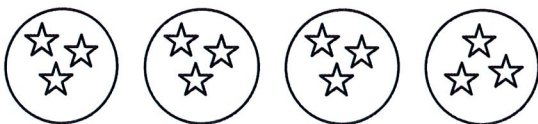
Show 3×5 by drawing an array.

Complete the equation. $3 \times 5 =$ _____

- 2** Write an equation that matches the array.



- 3** Write an equation that matches the picture.



- 4** Use words to describe the drawing for problem 3.

Multiplying with 2, 5, and 10

Name: _____

Multiply.

1 $5 \times 2 =$ _____ **2** $2 \times 5 =$ _____ **3** $2 \times 10 =$ _____ **4** $10 \times 2 =$ _____

5 $10 \times 5 =$ _____ **6** $5 \times 10 =$ _____ **7** $6 \times 2 =$ _____ **8** $2 \times 6 =$ _____

9 $3 \times 10 =$ _____ **10** $10 \times 3 =$ _____ **11** $7 \times 2 =$ _____ **12** $2 \times 7 =$ _____

13 $4 \times 10 =$ _____ **14** $10 \times 4 =$ _____ **15** $5 \times 4 =$ _____ **16** $4 \times 5 =$ _____

17 $2 \times 2 =$ _____ **18** $5 \times 5 =$ _____ **19** $10 \times 10 =$ _____

20 What patterns do you notice in the problems? Explain.

21 Draw a model to show how you solved one of the problems.

Write the missing digits in the boxes to make each multiplication problem true.

$3 \times 1 = \square$

$0 \times 7 = \square$

$5 \times 1 = \square$

$1 \times 0 = \square$

$1 \times 7 = \square$

$4 \times \square = 0$

$4 \times \square = 4$

$9 \times \square = 0$

$\square \times 1 = 3$

$\square \times 9 = 9$

$\square \times 8 = 0$

$\square \times 6 = 0$

Write two factors to make each multiplication problem true.

$\square \times \square = 5$

$\square \times \square = 7$

$\square \times \square = 2$

$\square \times \square = 1$

Write a digit in the box to make the multiplication problem true. Then use words to write about the groups.

$\square \times 0 = 0$

Multiplying with 3

Name: _____

Multiply.

1 $2 \times 3 =$ _____ **2** $3 \times 2 =$ _____ **3** $10 \times 3 =$ _____ **4** $3 \times 10 =$ _____

5 $5 \times 3 =$ _____ **6** $3 \times 5 =$ _____ **7** $4 \times 3 =$ _____ **8** $3 \times 4 =$ _____

9 $9 \times 3 =$ _____ **10** $3 \times 9 =$ _____ **11** $1 \times 3 =$ _____ **12** $3 \times 1 =$ _____

13 $8 \times 3 =$ _____ **14** $3 \times 8 =$ _____ **15** $6 \times 3 =$ _____ **16** $3 \times 6 =$ _____

17 $7 \times 3 =$ _____ **18** $3 \times 7 =$ _____ **19** $0 \times 3 =$ _____ **20** $3 \times 3 =$ _____

21 Tell how you could check that your answer to problem 9 is correct.

22 Draw a model to show how you solved one of the problems.

Multiplying with 4

Name: _____

Multiply.

1 $2 \times 4 =$ _____ **2** $3 \times 4 =$ _____ **3** $10 \times 4 =$ _____ **4** $5 \times 4 =$ _____

5 $7 \times 4 =$ _____ **6** $6 \times 4 =$ _____ **7** $8 \times 4 =$ _____ **8** $9 \times 4 =$ _____

9 $1 \times 4 =$ _____ **10** $4 \times 5 =$ _____ **11** $0 \times 4 =$ _____ **12** $4 \times 10 =$ _____

13 $4 \times 3 =$ _____ **14** $4 \times 2 =$ _____ **15** $4 \times 1 =$ _____ **16** $4 \times 4 =$ _____

17 Tell what strategy you used to solve 6×4 .

18 Draw a model to show how you solved one of the problems.

Multiplying with 6

Name: _____

Multiply.

1 $5 \times 6 =$ _____ **2** $3 \times 6 =$ _____ **3** $10 \times 6 =$ _____ **4** $2 \times 6 =$ _____

5 $7 \times 6 =$ _____ **6** $4 \times 6 =$ _____ **7** $8 \times 6 =$ _____ **8** $1 \times 6 =$ _____

9 $9 \times 6 =$ _____ **10** $6 \times 5 =$ _____ **11** $0 \times 6 =$ _____ **12** $6 \times 10 =$ _____

13 $6 \times 3 =$ _____ **14** $6 \times 2 =$ _____ **15** $6 \times 5 =$ _____ **16** $6 \times 6 =$ _____

17 Tell a strategy you can use to show 5×6 .

18 Explain how problem 2 and problem 13 are related.

Multiplying with 7

Name: _____

The answers are mixed up at the bottom of the page. Cross out the answers as you complete the problems.

1 $3 \times 7 =$ _____

2 $6 \times 7 =$ _____

3 $8 \times 7 =$ _____

4 $2 \times 7 =$ _____

5 $9 \times 7 =$ _____

6 $1 \times 7 =$ _____

7 $7 \times 0 =$ _____

8 $10 \times 7 =$ _____

9 $4 \times 7 =$ _____

10 $5 \times 7 =$ _____

11 $7 \times 3 =$ _____

12 $0 \times 7 =$ _____

13 $7 \times 2 =$ _____

14 $7 \times 10 =$ _____

15 $7 \times 4 =$ _____

16 $7 \times 1 =$ _____

17 $7 \times 5 =$ _____

18 $7 \times 7 =$ _____

Answers

14	63	35	70	0	42
7	28	14	21	56	21
28	0	70	49	35	7

Multiplying with 8

Name: _____

The answers are mixed up at the bottom of the page. Cross out the answers as you complete the problems.

1 $2 \times 8 =$ _____

2 $6 \times 8 =$ _____

3 $7 \times 8 =$ _____

4 $3 \times 8 =$ _____

5 $9 \times 8 =$ _____

6 $1 \times 8 =$ _____

7 $0 \times 8 =$ _____

8 $10 \times 8 =$ _____

9 $4 \times 8 =$ _____

10 $5 \times 8 =$ _____

11 $8 \times 3 =$ _____

12 $8 \times 0 =$ _____

13 $8 \times 2 =$ _____

14 $8 \times 10 =$ _____

15 $8 \times 4 =$ _____

16 $8 \times 7 =$ _____

17 $8 \times 5 =$ _____

18 $8 \times 8 =$ _____

Answers

64	40	48	8	0	56
72	80	24	32	16	32
24	0	80	40	56	16

Multiplying with 9

Name: _____

The answers are mixed up at the bottom of the page. Cross out the answers as you complete the problems.

1 $1 \times 9 =$ _____

2 $6 \times 9 =$ _____

3 $7 \times 9 =$ _____

4 $2 \times 9 =$ _____

5 $8 \times 9 =$ _____

6 $3 \times 9 =$ _____

7 $0 \times 9 =$ _____

8 $10 \times 9 =$ _____

9 $4 \times 9 =$ _____

10 $5 \times 9 =$ _____

11 $9 \times 3 =$ _____

12 $9 \times 8 =$ _____

13 $9 \times 2 =$ _____

14 $9 \times 10 =$ _____

15 $9 \times 4 =$ _____

16 $9 \times 7 =$ _____

17 $9 \times 5 =$ _____

18 $9 \times 9 =$ _____

Answers

63	45	18	81	90	36
72	54	27	36	72	63
90	0	18	9	27	45

Using Order to Multiply

Name: _____

Write the missing numbers in the boxes to make each multiplication problem true.

$5 \times 6 = \square$

$2 \times 6 = \square$

$4 \times 5 = \square$

$6 \times 5 = \square$

$6 \times 2 = \square$

$5 \times 4 = \square$

$3 \times 8 = \square$

$4 \times 7 = \square$

$5 \times 9 = \square$

$8 \times 3 = \square$

$7 \times 4 = \square$

$9 \times 5 = \square$

$9 \times 2 = \square$

$\square \times 5 = 15$

$7 \times 8 = \square$

$2 \times \square = 18$

$5 \times 3 = \square$

$\square \times 7 = 56$

$\square \times 10 = 70$

$\square \times 5 = 10$

$3 \times \square = 12$

$10 \times \square = 70$

$5 \times \square = 10$

$\square \times 3 = 12$

1 Look at 6×5 and 5×6 . How does the order of the factors change the product?

2 Draw two arrays to show 4×7 and 7×4 .

Using Grouping to Multiply

Name: _____

**Draw parentheses around the numbers you want to multiply first.
Then find the product.**

1 $6 \times 3 \times 2$
 $6 \times (3 \times 2)$
 $6 \times 6 = 36$

Sample Student Work:
 $3 \times 2 = 6$; $6 \times 6 = 36$

2 $4 \times 3 \times 3$

3 $5 \times 2 \times 8$

4 $8 \times 2 \times 4$

5 $2 \times 2 \times 7$

6 $6 \times 5 \times 2$

7 $3 \times 3 \times 7$

8 $2 \times 4 \times 5$

9 $7 \times 4 \times 2$

10 $6 \times 3 \times 3$

11 $3 \times 3 \times 10$

12 $2 \times 3 \times 4$

13 How did you decide which factors to group?

14 Choose one problem. Tell two ways you can group the factors. Then explain which way is easier for you to solve.

Using Order and Grouping to Multiply

Name: _____

Order and group the factors to show how you want to multiply. Then find the product.

1 $5 \times 7 \times 2$
 $5 \times 2 \times 7$
 $(5 \times 2) \times 7$
 $10 \times 7 = 70$

2 $3 \times 5 \times 3$

3 $4 \times 8 \times 2$

4 $2 \times 9 \times 5$

5 $2 \times 10 \times 5$

6 $2 \times 8 \times 2$

7 $3 \times 9 \times 3$

8 $5 \times 2 \times 6$

9 $4 \times 5 \times 2$

10 $2 \times 9 \times 2$

11 $3 \times 8 \times 2$

12 $4 \times 2 \times 7$

13 What strategies did you use to decide how to order and group the factors?

14 Why do you need to reorder factors in some problems?

Understanding of Division Models

Name: _____

- 1** Draw a model to show $12 \div 6$. Show 6 equal groups. How many are in each group?

There are 12 in all. There are 6 equal groups. There are _____ in each group.
 $12 \div 6 =$ _____

- 2** Draw a model to show $12 \div 6$. Show 6 in each group. How many groups are there?

There are 12 in all. There are 6 in each group. There are _____ groups.
 $12 \div 6 =$ _____

- 3** Draw an array to find $21 \div 3$.

- 4** Draw an array to find $20 \div 4$.

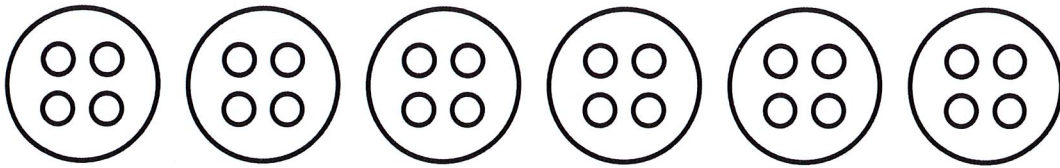
$$21 \div 3 = \underline{\hspace{2cm}}$$

$$20 \div 4 = \underline{\hspace{2cm}}$$

- 5** What situation could be modeled with the equation $40 \div 8 = 5$?

Understanding of How Multiplication and Division Are Connected

Name: _____



- 1** There are 24 marbles. Each bag has 4 marbles.

Write an equation that shows the number of bags.

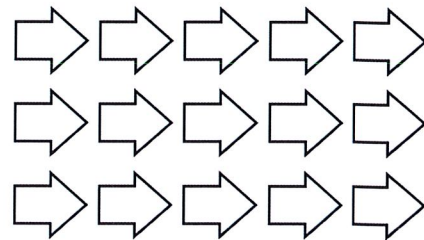
- 2** There are 24 marbles. An equal number of marbles are in 6 bags.

Write an equation that shows the number of marbles in each bag.

- 3** There are 6 bags of marbles. 4 marbles are in each bag.

Write two different equations that show the total number of marbles.

- 4** Write 2 multiplication equations and 2 division equations for this array.



Find the value of ? to complete each fact.

5 $6 \times ? = 48$

$48 \div 6 = ?$

$? =$ _____

6 $? \times 5 = 45$

$45 \div ? = 5$

$? =$ _____

7 $63 \div 9 = ?$

$? \times 9 = 63$

$? =$ _____

8 $32 \div ? = 8$

$8 \times ? = 32$

$? =$ _____

Working with Division Facts

Name: _____

The answers are mixed up at the bottom of the page. Cross out the answers as you complete the problems.

1 $40 \div 4 =$ _____

2 $18 \div 3 =$ _____

3 $24 \div 4 =$ _____

4 $24 \div 8 =$ _____

5 $14 \div 2 =$ _____

6 $40 \div 8 =$ _____

7 $42 \div 7 =$ _____

8 $64 \div 8 =$ _____

9 $32 \div 8 =$ _____

10 $56 \div 8 =$ _____

11 $27 \div 9 =$ _____

12 $28 \div 7 =$ _____

13 $72 \div 8 =$ _____

14 $90 \div 9 =$ _____

15 $54 \div 9 =$ _____

16 $48 \div 8 =$ _____

17 $49 \div 7 =$ _____

18 $27 \div 3 =$ _____

Answers:

4	4	9	6	7	10
5	10	3	3	6	7
8	6	6	7	6	9

Using a Multiplication Table

Name: _____

×	1	2	3	4	5	6	7	8	9	10
1	1	2	3	4	5	6	7	8	9	10
2	2	4	6	8	10	12	14	16	18	20
3	3	6	9	12	15	18	21	24	27	30
4	4	8	12	16	20	24	28	32	36	40
5	5	10	15	20	25	30	35	40	45	50
6	6	12	18	24	30	36	42	48	54	60
7	7	14	21	28	35	42	49	56	63	70
8	8	16	24	32	40	48	56	64	72	80
9	9	18	27	36	45	54	63	72	81	90
10	10	20	30	40	50	60	70	80	90	100

Write the missing numbers in the boxes to make each multiplication or division problem true.

$5 \times 7 = \square$

$32 \div 8 = \square$

$4 \times 7 = \square$

$27 \div \square = 9$

$\square \div 5 = 7$

$8 \times \square = 32$

$\square \div 4 = 7$

$9 \times \square = 27$

$4 \times 4 = \square$

$9 \times 6 = \square$

$6 \times 6 = \square$

$81 \div \square = 9$

$\square \div 4 = 4$

$54 \div \square = 6$

$63 \div \square = 9$

$40 \div 8 = \square$

$\square \div 8 = 6$

$56 \div \square = 8$

$45 \div 5 = \square$

$\square \div 7 = 7$

1 Write 3 possible answers for the equation $36 \div \square = \square$.

Solve. Look for patterns.

1 Subtract.

$10 - 1 = \underline{\hspace{2cm}}$

$20 - 1 = \underline{\hspace{2cm}}$

$30 - 1 = \underline{\hspace{2cm}}$

$100 - 1 = \underline{\hspace{2cm}}$

$200 - 1 = \underline{\hspace{2cm}}$

$300 - 1 = \underline{\hspace{2cm}}$

$200 - 100 = \underline{\hspace{2cm}}$

$300 - 100 = \underline{\hspace{2cm}}$

$400 - 100 = \underline{\hspace{2cm}}$

$200 - 101 = \underline{\hspace{2cm}}$

$300 - 101 = \underline{\hspace{2cm}}$

$400 - 101 = \underline{\hspace{2cm}}$

2 Multiply.

$2 \times 10 = \underline{\hspace{2cm}}$

$2 \times 9 = \underline{\hspace{2cm}}$

$3 \times 10 = \underline{\hspace{2cm}}$

$3 \times 9 = \underline{\hspace{2cm}}$

$4 \times 10 = \underline{\hspace{2cm}}$

$4 \times 9 = \underline{\hspace{2cm}}$

$5 \times 10 = \underline{\hspace{2cm}}$

$5 \times 9 = \underline{\hspace{2cm}}$

$6 \times 10 = \underline{\hspace{2cm}}$

$6 \times 9 = \underline{\hspace{2cm}}$

$7 \times 10 = \underline{\hspace{2cm}}$

$7 \times 9 = \underline{\hspace{2cm}}$

$8 \times 10 = \underline{\hspace{2cm}}$

$8 \times 9 = \underline{\hspace{2cm}}$

$9 \times 10 = \underline{\hspace{2cm}}$

$9 \times 9 = \underline{\hspace{2cm}}$

3 Describe the patterns that you notice in the problems you just solved.

Solving Problems About Equal Groups

Name: _____

Read and solve each problem. Show your work.

- 1** Heather has 18 photographs of rockets. She wants to hang them on 3 different walls in her room. Each wall will have the same number of photographs. How many photographs will hang on each wall?

There will be _____ photographs on each wall.

- 2** There are 24 people who want to play volleyball. The coach divides the players into teams of 6. How many teams can she make?

The coach can make _____ teams.

- 3** At an art show, there are 7 groups of paintings with 6 paintings in each group. How many paintings are there in all?

There are _____ paintings.

- 4** Jasmine reads for 10 minutes each night. If she reads for 5 nights, how many minutes will she read in all?

Jasmine will read for _____ minutes.

- 5** Rhonda plants 28 tomato plants in her garden. She plants 7 tomato plants in each row. How many rows does she plant?

Rhonda plants _____ rows.

- 6** Mr. Jones buys 6 packages of pencils. There are 8 pencils in each package. How many pencils does Mr. Jones buy?

Mr. Jones buys _____ pencils.

- 7** Choose one problem. Describe the strategy you used to solve it.

Solving Problems About Arrays

Name: _____

Read and solve each problem. Show your work.

- 1** A parking lot has 6 rows of parking spaces. There are 5 spaces in each row. How many parking spaces are in the lot?
- 2** Jack has 36 toy robots. He wants to display 9 on each shelf in his room. How many shelves will Jack need to display all of the robots?

There are _____ parking spaces.

Jack will need _____ shelves.

- 3** There are 24 dancers. The teacher has them stand in 3 equal rows. How many dancers are in each row?
- 4** Emily is putting away plates. She puts 6 plates each in 3 stacks. How many plates does she put away?

There are _____ dancers in each row.

Emily puts away _____ plates.

- 5** A farmer picks 54 pumpkins. She places an equal number of pumpkins in 9 wagons. How many pumpkins are in each wagon?
- 6** The school band marches in rows at the parade. There are 24 band members and they form rows with 4 members in each row. How many rows are there?

There are _____ pumpkins in each wagon.

There are _____ rows.

- 7** Choose one problem. Describe and use a strategy to check your answer.

Solving Problems About Area

Name: _____

Read and solve each problem. Show your work.

- 1** Nya covers a rectangular tray with 1-square-inch tiles. She uses 42 tiles, arranged in 7 rows. How many tiles are in each row?

There are _____ tiles in each row.

- 2** Jacob uses tiles to cover a rectangular hallway. Each tile has an area of 1 square foot. He uses 3 rows of tiles, with 8 tiles in each row. What is the area of the hallway?

The area of the hallway is _____ square feet.

- 3** Sara covers the top of a box with squares of paper that are 1 square centimeter. She uses 48 squares, with 6 squares in each row. How many rows did she make?

Sara made _____ rows.

- 4** There are 64 squares on Rasha's chessboard. Each square is 1 square inch. There are 8 rows of squares on her chessboard. How many squares are in each row?

There are _____ squares in each row.

- 5** A rectangular patio at an outdoor restaurant is made of 35 tiles. Each tile is 1 square yard. If there are 5 tiles in each row, how many rows are there?

There are _____ rows of tiles.

- 6** Mr. Reilly uses square pieces of fabric that are each 1 square inch for a rectangular wall hanging. He uses 81 squares. If he makes 9 rows of squares, how many squares will be in each row?

There will be _____ squares in each row.

- 7** Choose one problem. Describe the strategy you used to solve it.

- 8** Explain why you chose that strategy to solve the problem.

Solving Two-Step Word Problems Using Two Equations

Name: _____

Read and solve each problem by writing an equation for each step. Use letters for the unknown numbers. Show your work.

- 1** Hirami has 12 cups of flour in a bag and 6 cups of flour in a jar. He is making batches of bread that each call for 3 cups of flour. How many batches of bread can Hirami make?

Hirami can make _____ batches of bread.

- 2** Cassi bought 50 pounds of dirt. She used 10 pounds to fill a hole in her yard. Then she filled pots with 5 pounds of soil in each pot. How many pots could she fill?

Cassi can fill _____ pots.

- 3** Becky has 6 packages of clay that each weigh 5 pounds. To make a bowl, she needs 3 pounds of clay. How many bowls can Becky make?

Becky can make _____ bowls.

- 4** Marc has 36 pounds of apples to use to make pies. He uses 4 pounds of apples for each pie. Marc uses all of the apples to make pies, and then sells each pie for \$8. How much money does Marc collect for all the pies?

Marc collects \$ _____ for all the pies.

- 5** Choose one problem. Tell how you could solve the problem in a different way.

Solving Two-Step Word Problems Using One Equation

Name: _____

Read and solve each problem by writing one equation.

Show your work.

- 1** Mrs. Nelson has one \$10-bill and one \$20-bill. She wants to buy as many movie tickets as she can with this money. If movie tickets cost \$6 each, how many tickets, t , can she buy?

Mrs. Nelson can buy _____ tickets.

- 2** Daisy has a goal of reading 75 minutes in one week. She reads 9 minutes a day for 5 days. How many more minutes, m , will she have to read to reach her goal?

Daisy will have to read _____ more minutes.

- 3** Mr. Garcia buys 3 bags of cat food that each weigh 9 pounds and another bag of cat food that weighs 7 pounds. How many pounds, p , of cat food did Mr. Garcia buy?

Mr. Garcia bought _____ pounds of cat food.

- 4** Jackson has 48 trading cards. His sister gives him 12 more cards. Then he puts all his trading cards in 6 equal stacks. How many cards, c , are in each stack?

There are _____ cards in each stack.

- 5** Choose one problem. Explain how you decided which operations to use to solve it.

Estimating Solutions to Word Problems

Name: _____

**Read each problem. Estimate the answer by rounding to the nearest ten.
Then find the actual answer. Show your work.**

- 1** Marie has 231 toothpicks in one box and 175 toothpicks in another box. She uses 319 toothpicks to make a bridge. How many toothpicks does she have left?

Estimate: There are about _____ toothpicks left.

Marie has _____ toothpicks left.

- 2** Kennedy School has 124 third-grade students. Carter School has 16 fewer third-grade students than Kennedy School. How many third-grade students in all are at Kennedy School and Carter School?

Estimate: There are about _____ students.

There are _____ students.

- 3** There are 197 oak trees in the park. There are 27 more pine trees than oak trees in the park. How many trees are there in all?

Estimate: There are about _____ trees.

There are _____ trees in all.

- 4** On the first day of a bus trip, Brian and his dad traveled 341 miles. On the second day, they traveled 39 fewer miles. How many miles did they travel in all after two days?

Estimate: They traveled about _____ miles.

They traveled _____ miles.

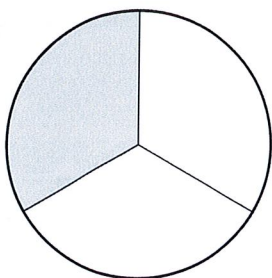
- 5** How does an estimate help you decide if your answer is reasonable?

Describing Parts of a Whole with Fractions

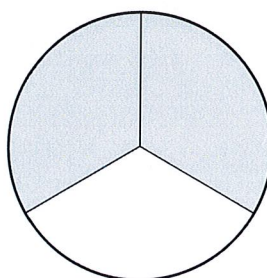
Name: _____

Write the fraction of the figure that is shaded.

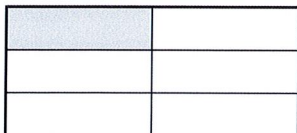
1



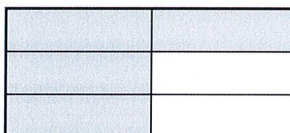
2



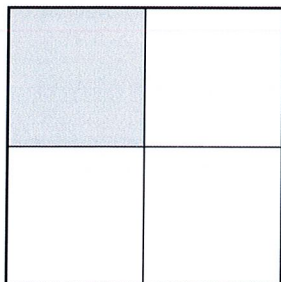
3



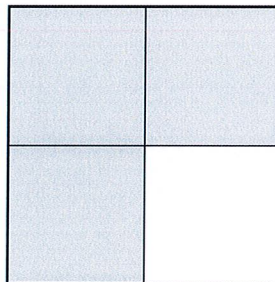
4



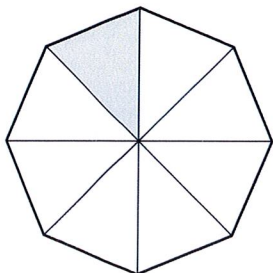
5



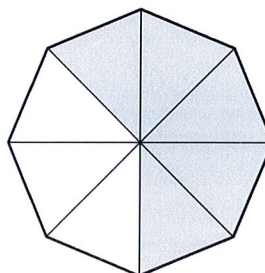
6



7



8



Describing Parts of a Whole with Fractions *continued*

Name: _____

9 Draw a circle that shows 4 equal parts. Then shade to show $\frac{2}{4}$.

10 Draw a rectangle that shows 3 equal parts. Then shade to show $\frac{2}{3}$.

11 Draw a square that shows 8 equal parts. Then shade to show $\frac{3}{8}$.

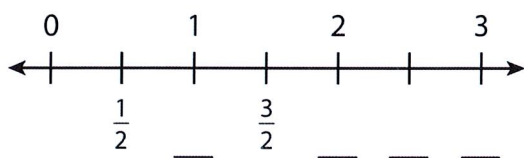
12 Draw a circle that shows 6 equal parts. Then shade to show $\frac{5}{6}$.

Understanding of Fractions on a Number Line

Name: _____

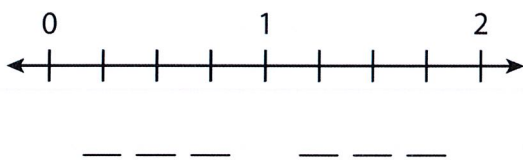
Set A

Write the missing labels on the number line.



Set B

Use this number line to solve problems 1–4.



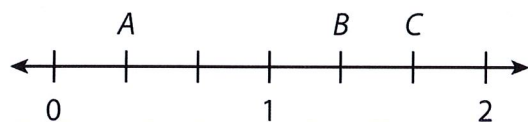
- 1 How many equal parts are between 0 and 1? _____
- 2 How many equal parts are between 1 and 2? _____
- 3 What fraction does each part show? _____
- 4 Write fractions to label the marks.

Understanding of Fractions on a Number Line *continued*

Name: _____

Set C

Use this number line to solve problems 5–7.



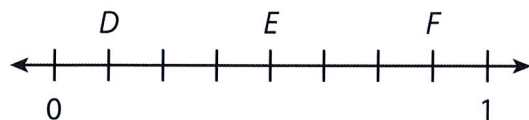
5 A is _____.

6 B is _____.

7 C is _____.

Set D

Use this number line to solve problems 8–10.



8 D is _____.

9 E is _____.

10 F is _____.

Telling Time to the Minute

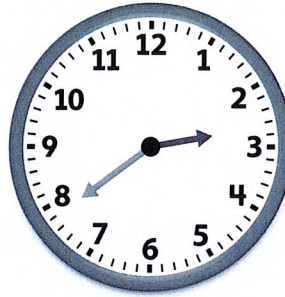
Name: _____

Write the time the clock shows.

1



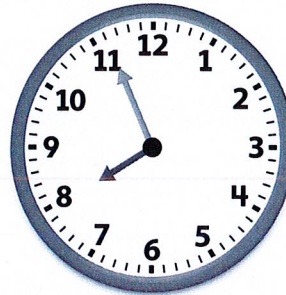
2



3



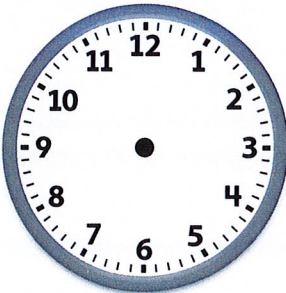
4



Draw hands on the clock to show the given time.

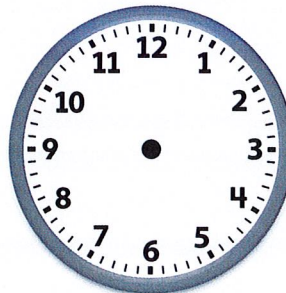
5

16 minutes after 1

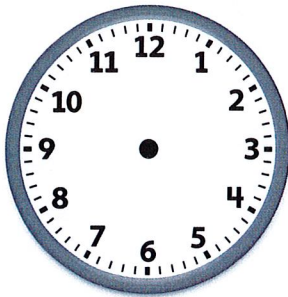


6

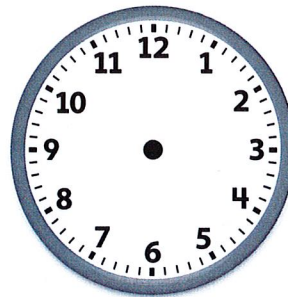
7 minutes before 9



- 7** 35 minutes after 3



- 8** 26 minutes before 8



- 9** Write a word problem that could use one of the times shown on one of the clocks.