

DIVISION OF EQUITY AND ACCESS - Curriculum, Instruction, and School Supervision

"Without mathematics, there's nothing you can do. Everything around you is mathematics. Everything around you is numbers." ~ Shakuntala Devi

Work your math muscles in July and August!



Grade 3

Dear Parent(s)/Guardian,

Please have your child complete 1-3 practice assignments per week. Upon completion, please visit our Summer Learning District Website to obtain the answers and check your child's work. In addition to this packet, you will find additional resources for your youngster on our website. Feel free to contact Dr. Pemberton at cpemberton@yonkerspublicschools.org with any questions. Happy Numerical Learning!

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Grade 3 Math concepts covered in this packet

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Show 3×5 by drawing equal groups of 5.

Show 3×5 by drawing an array.

Complete the equation. $3 \times 5 =$

Write an equation that matches the array.

Write an equation that matches the picture.









4 Use words to describe the drawing for problem 3.

1
$$5 \times 2 =$$
 2 $2 \times 5 =$ 2 $2 \times 5 =$ 4 $10 \times 2 =$ 4

$$2 \times 5 =$$

$$510 \times 5 =$$

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

$$10 \times 3 =$$

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

$$2 \times 7 =$$

13
$$4 \times 10 =$$
 16 $4 \times 5 =$ 17 $4 \times 10 =$ 18 $4 \times 5 =$ 19 $4 \times 5 =$ 19 $4 \times 5 =$ 10 $4 \times 5 =$ 10

$$4 \times 5 =$$

$$\mathbf{7} \times 2 = \underline{}$$

18
$$5 \times 5 =$$

$$72 \times 2 =$$
 $910 \times 10 =$

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

$$3 \times 1 =$$

$$3 \times 1 = \boxed{ }$$
 $0 \times 7 = \boxed{ }$ $5 \times 1 = \boxed{ }$ $1 \times 0 = \boxed{ }$

$$1 \times 0 =$$

$$1 \times 7 = \boxed{}$$

$$4 \times \boxed{} = 4$$

$$9 \times \boxed{} = 0$$

$$\times 1 = 3$$

$$\times$$
 9 = 9

$$\times$$
 8 = 0

$$\times$$
 6 = 0

Write two factors to make each multiplication problem true.

$$\times$$
 = 5

$$| \times | = 7$$

$$\times$$
 $= 2$

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

$$\times$$
 0 = 0

6

1
$$2 \times 3 =$$

$$3 \times 2 =$$

1)
$$2 \times 3 =$$
 _____ 2 $3 \times 2 =$ ____ 2 $10 \times 3 =$ ____ 4 $3 \times 10 =$ ____

6
$$3 \times 5 =$$

$$7 4 \times 3 =$$

$$3 \times 4 =$$

$$3 \times 9 =$$

$$1 \times 3 =$$

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

$$3 \times 8 =$$

13
$$8 \times 3 =$$
 14 $3 \times 8 =$ 15 $6 \times 3 =$ 16 $3 \times 6 =$ 17

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

$$3 \times 7 =$$

$$20 3 \times 3 =$$

- Tell how you could check that your answer to problem 9 is correct.
- Draw a model to show how you solved one of the problems.

$$2 \ 3 \times 4 =$$

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

$$5 7 \times 4 =$$

$$6 \times 4 =$$

$$4 \times 5 =$$

$$0 \times 4 =$$

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

$$4 \times 2 =$$

13
$$4 \times 3 =$$
 _____ 16 $4 \times 4 =$ _____ 16 $4 \times 4 =$ _____

- \square Tell what strategy you used to solve 6 \times 4.
- Draw a model to show how you solved one of the problems.

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

$$3 \times 6 =$$

$$2 \times 6 =$$

$$7 \times 6 =$$

$$64 \times 6 =$$

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

$$6 \times 5 =$$

$$0 \times 6 =$$

$$6 \times 3 =$$

$$6 \times 2 =$$

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

- Tell a strategy you can use to show 5×6 .
- Explain how problem 2 and problem 13 are related.

$$3 \times 7 =$$

$$2 6 \times 7 =$$

$$4 \times 7 =$$

$$61 \times 7 =$$

$$7 \times 0 =$$

9
$$4 \times 7 =$$

$$5 \times 7 =$$

$$0 \times 7 =$$

$$7 \times 2 =$$

$$7 \times 10 =$$

$$7 \times 4 =$$

$$7 \times 1 =$$

$$7 \times 5 =$$

$$7 \times 7 =$$

Answers

$$2 6 \times 8 =$$

$$7 \times 8 =$$

$$3 \times 8 =$$

10
$$5 \times 8 =$$

$$8 \times 3 =$$

$$8 \times 7 =$$

$$8 \times 5 =$$

Answers

$$1 \times 9 =$$

$$[3] 7 \times 9 = _____$$

$$2 \times 9 =$$

$$0 \times 9 =$$

$$0 \times 3 =$$

$$9 \times 8 =$$

$$\mathfrak{B} 9 \times 4 =$$

$$69 \times 7 =$$

$$9 \times 5 =$$

$$9 \times 9 =$$

Answers

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

$$5 \times 6 =$$

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

$$4 \times 5 =$$

$$6 \times 5 =$$

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

$$5 \times 4 = \boxed{}$$

$$3 \times 8 = \boxed{}$$

$$4 \times 7 = \boxed{}$$

$$5 \times 9 = \boxed{}$$

$$8 \times 3 = \boxed{}$$

$$7 \times 4 = \boxed{}$$

$$9 \times 5 = \boxed{}$$

$$\times$$
 5 = 15

$$7 \times 8 = \boxed{}$$

$$5 \times 3 = \boxed{}$$

$$\times$$
 7 = 56

$$\times$$
 10 = 70

$$\times$$
 5 = 10

$$3 \times \boxed{} = 12$$

$$5 \times \boxed{} = 10$$

$$\times$$
 3 = 12

- Look at 6 imes 5 and 5 imes 6. How does the order of the factors change the product?
- 2 Draw two arrays to show 4×7 and 7×4 .

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

$$6 \times 3 \times 2$$

$$24 \times 3 \times 3$$

$$5 \times 2 \times 8$$

$$6 \times (3 \times 2)$$

$$6 \times 6 = 36$$

Sample Student Work:

$$3 \times 2 = 6; 6 \times 6 = 36$$

$$48\times2\times4$$

$$2 \times 2 \times 7$$

$$6 \times 5 \times 2$$

$$73 \times 3 \times 7$$

$$2 \times 4 \times 5$$

$$97\times4\times2$$

$$\mathbf{0} 6 \times 3 \times 3$$

$$3 \times 3 \times 10$$

$$2 \times 3 \times 4$$

- B How did you decide which factors to group?
- Choose one problem. Tell two ways you can group the factors. Then explain which way is easier for you to solve.

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 × 2) × 7
 $10 \times 7 = 70$

$$23 \times 5 \times 3$$

$$4 \times 8 \times 2$$

$$42 \times 9 \times 5$$

$$52 \times 10 \times 5$$

$$62 \times 8 \times 2$$

$$7 3 \times 9 \times 3$$

$$8 5 \times 2 \times 6$$

$$94 \times 5 \times 2$$

$$10 2 \times 9 \times 2$$

$$113 \times 8 \times 2$$

- What strategies did you use to decide how to order and group the factors?
- Why do you need to reorder factors in some problems?

Understanding of Division Models

Name: _____

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. $12 \div 6 =$ _____ in

 \square Draw a model to show 12 ÷ 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. $12 \div 6 =$ ____

- Draw an array to find 21 \div 3.
- \blacksquare Draw an array to find $20 \div 4$.

21 ÷ 3 = _____

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













There are 24 marbles. Each bag has 4 marbles.

Write an equation that shows the number of bags.

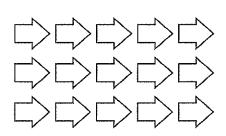
There are 24 marbles. An equal number of marbles are in 6 bags.

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

There are 6 bags of marbles. 4 marbles are in each bag.

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

Write 2 multiplication equations and 2 division equations for this array.



Find the value of? to complete each fact.

$$6 \times ? = 48$$

6
$$? \times 5 = 45$$
 7 $63 \div 9 = ?$

$$32 \div ? = 8$$

$$48 \div 6 = ?$$

$$45 \div ? = 5$$

$$? \times 9 = 63$$

$$8 \times ? = 32$$

$$27 \div 9 =$$

Answers:

×	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.

$$5 \times 7 =$$

$$5 \times 7 = \boxed{ 32 \div 8 = \boxed{ }}$$

$$4 \times 7 = \boxed{}$$

$$| \div 5 = 7$$

$$|\div 5 = 7$$
 $8 \times | = 32$

$$\div 4 = 7$$

$$4 \times 4 = \boxed{}$$

$$9 \times 6 = \boxed{}$$
 $6 \times 6 = \boxed{}$

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

$$81 \div \boxed{} = 9$$

$$\div 4 = 4$$

$$54 \div | = \epsilon$$

$$54 \div \boxed{} = 6 \qquad \qquad 63 \div \boxed{} = 9 \qquad \qquad 40 \div 8 = \boxed{}$$

$$\div 8 = 6$$

$$| \div 8 = 6$$
 $56 \div | = 8$ $45 \div 5 = |$

$$\div$$
 7 = 7

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

Solve. Look for patterns.

Subtract.

2 Multiply.

$$2 \times 10 =$$

$$7 \times 10 =$$

$$3 \times 9 =$$

$$7 \times 9 =$$

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.

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

There will be _____ photographs on each wall.

The coach can make teams.

- At an art show, there are 7 groups of paintings with 6 paintings in each group. How many paintings are there in all?
- Jasmine reads for 10 minutes each night. If she reads for 5 nights, how many minutes will she read in all?

There are _____ paintings.

Jasmine will read for _____ minutes.

- Rhonda plants 28 tomato plants in her garden. She plants 7 tomato plants in each row. How many rows does she plant?
- Mr. Jones buys 6 packages of pencils. There are 8 pencils in each package. How many pencils does Mr. Jones buy?

Rhonda plants _____ rows.

Mr. Jones buys _____ pencils.

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

Solving Problems About Arrays

	•
Name:	

Read and solve each problem. Show your work.

- A parking lot has 6 rows of parking spaces. There are 5 spaces in each row. How many parking spaces are in the lot?
- 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.

- There are 24 dancers. The teacher has them stand in 3 equal rows. How many dancers are in each row?
- 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.

- A farmer picks 54 pumpkins. She places an equal number of pumpkins in 9 wagons. How many pumpkins are in each wagon?
- 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.

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

Solving Problems About Avea

Name:	
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Read and solve each problem. Show your work.

- 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?
- 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?

There are _____ tiles in each row.

The area of the hallway is _____square feet.

- 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?
- 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?

Sara made _____ rows.

There are _____ squares in each row.

- 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?
- 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 are _____ rows of tiles.

There will be _____ squares in each row.

- Choose one problem. Describe the strategy you used to solve it.
- Explain why you chose that strategy to solve the problem.

Salving Iwo-Step Word Problems Using Iwo Equations

ame:

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

- 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?
- 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?

Hirami can make _____ batches of bread.

Cassi can fill _____ pots.

- 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?
- 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?

Becky can make _____ bowls.

Marc collects \$ _____ for all the pies.

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

Salving Two-Step World Endolems Using Ome Equation

Name:

Read and solve each problem by writing one equation. Show your work.

- 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?
- 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?

Mrs. Nelson can buy _____ tickets.

Daisy will have to read _____ more minutes.

- 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?
- 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?

Mr. Garcia bought _____ pounds of cat food.

There are _____ cards in each stack.

El Choose one problem. Explain how you decided which operations to use to solve it.

Estimating Salutions to Word Problems

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

- 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?
- 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 _____toothpicks left.

Estimate: There are about _____students.

Marie has _____ toothpicks left.

There are _____ students.

- 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?
- 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: There are about _____ trees.

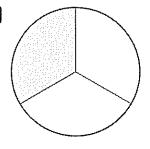
Estimate: They traveled about ______

There are _____ trees in all.

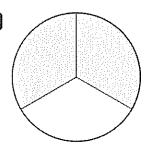
They traveled _____ miles.

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

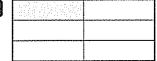
Write the fraction of the figure that is shaded.



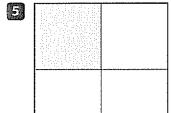
2

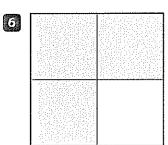


3

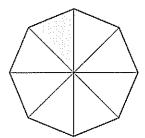


4

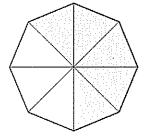




7



8



27

Decadoing Rantsofs Whole with Exactions continued

Name: _____

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

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

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

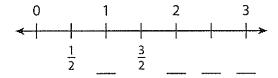
Draw a circle that shows 6 equal parts. Then shade to show $\frac{5}{6}$.

Undersmilling of Estations on a Number Line

Name: _____

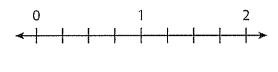
Set A

Write the missing labels on the number line.



Set B

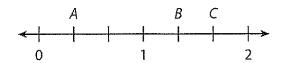
Use this number line to solve problems 1-4.



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

SetC

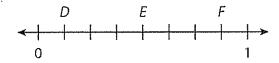
Use this number line to solve problems 5-7.



- **5** A is _____.
- **6 B** is _____.
- **7 C** is ______.

Set O

Use this number line to solve problems 8-10.



- **3 D** is _____.
- **© E** is ______.
- **10 F** is ______.

Write the time the clock shows.

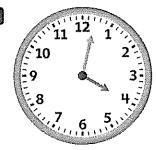
1

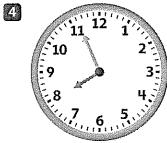


2



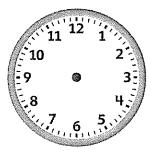
3





Draw hands on the clock to show the given time.

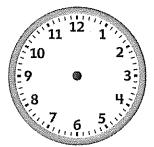
5 16 minutes after 1



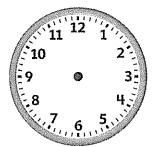
6 7 minutes before 9

31

35 minutes after 3



26 minutes before 8



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