

Chapter 8: Understand Division

Dear Family,

Welcome back! Happy New Year! I hope you had a joyful and relaxing Winter Break, filled with wonderful memories and time to recharge!

During the next few weeks, our math class will be learning about division. We will learn how to represent division as the number of equal groups or the number in each equal group. We will learn how division is related to subtraction, and how multiplication and division are inverse operations.

You can expect to see homework that provides practice with division.

Vocabulary

Divide: To separate into equal groups

Dividend, Divisor, Quotient

The parts of a division problem. There are two ways to record division.

Inverse Operations:

Opposite operations, or operations that undo one another.

Related Facts: A set of related multiplication and division equations.

Examples:

$$4 \times 7 = 28 \quad 28 \div 4 = 7$$

$$7 \times 4 = 28 \quad 28 \div 7 = 4$$

- Homework due date: Sunday, Jan. 12th **Upload HW on [Archie](#)**
- Feel free to contact me with any questions at diana.charaf@archimedean.org

Complete homework daily based on the schedule provided below:

Monday 01/06

Pages: 321, 322

Tuesday 01/07

Pages: 327, 328

Wednesday 01/08

Pages: 333, 334

Thursday 01/09

Pages: 339, 340

Friday 01/10

Pages: 345, 346



Represent Division

Go Online

Interactive Examples

Solve each problem.

1. Six customers at a toy store bought 18 jump ropes altogether. Each customer bought the same number of jump ropes. How many jump ropes did each customer buy?

3 jump ropes

2. Hiro has 36 pictures of his summer trip. He wants to put them in an album. Each page of the album holds 4 pictures. How many pages will Hiro need for his pictures?

3. Katia has 42 crayons in a box. She buys a storage bin that has 6 sections. She puts the same number of crayons in each section. How many crayons does Katia put in each section of the storage bin?

4. Ms. Rivera's students give cards to each of the 3 class helpers. There are 24 cards. How many cards will each helper get if the students give an equal number of cards to each helper?

5.  **WRITE** *Math* Write a word problem about equal groups and act it out to solve.

Lesson Check

6. Maria buys 15 apples at the store and places them into bags. She puts 5 apples into each bag. How many bags does Maria use for all the apples?
7. Andres's neighbor is fixing a section of his walkway. He has 32 bricks that he is placing in 8 equal rows. How many bricks will Andres's neighbor place in each row?

Spiral Review

8. Find the unknown factor.

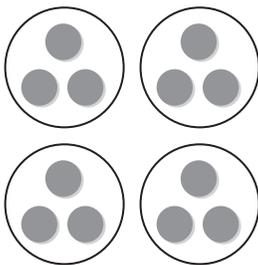
$$7 \times \square = 56$$

9. Count by tens and ones to find $27 + 33$. Use the number line to show your thinking. Then complete the equation.



$$27 + 33 =$$

10. Count equal groups to find how many counters there are.



11. What is another way to group the factors?

$$(3 \times 2) \times 5$$

Find the Size of Equal Groups

Go Online

Interactive Examples

Use counters or draw a quick picture. Make equal groups. Complete the table.

	Counters	Number of equal groups	Number in each group
1.	15	3	5
2.	21	7	
3.	28	7	
4.	32	4	
5.	9	3	
6.	35	5	
7.	24	3	

Problem Solving

8. Alicia has 12 eggs that she will use to make 4 different cookie recipes. If each recipe calls for the same number of eggs, how many eggs will she use in each recipe?
9. Basir picked 27 flowers from the garden. He plans to give an equal number of flowers to each of 3 people. How many flowers will each person get?

10.  *Math* Describe how to divide 18 strawberries equally between 2 of your friends.

Lesson Check

11. Ryan has 21 pencils. He wants to put the same number of pencils in each of 3 pencil holders. How many pencils will he put in each pencil holder?
12. Mahreen is setting out 24 plates on 6 tables for a dinner. She sets the same number of plates on each table. How many plates does Mahreen set on each table?

Spiral Review

13. Each table has 4 legs. How many legs do 4 tables have?
14. Jun has 3 stacks of 4 boxes on each of 3 shelves. How many boxes does Jun have?

15. What is the unknown factor?

$$7 \times \blacksquare = 35$$

16. Describe a pattern in the table. Then complete the pattern

Number of packs	1	2	3	4	5
Number of yo-yos	3	6	9	12	?

Find the Number of Equal Groups

Go Online

Interactive Examples

Draw counters on your MathBoard. Then circle equal groups. Complete the table.

	Counters	Number of equal groups	Number in each group
1.	24	3	8
2.	35		7
3.	30		5
4.	16		4
5.	12		6
6.	36		9
7.	18		3

Problem Solving

8. In his bookstore, Julio places 21 books on shelves, with 7 books on each shelf. How many shelves does Julio need?

9. Mr. Holden has 32 quarters in stacks of 4 on his desk. How many stacks of quarters are on his desk?

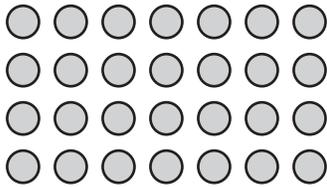
10.  *Math* Write and solve a math problem in which you need to find how many equal groups.

Lesson Check

11. Darius works at a clothing store. He puts 24 pairs of jeans into stacks of 8. How many stacks does Darius make?
12. There are 36 people waiting in line for a hay ride. Only 6 people can ride on each wagon. If each wagon is full, how many wagons are needed for all 36 people?

Spiral Review

13. What equation does the array show?
14. Keon buys 4 boxes of nails for a project. There are 30 nails in each box. How many nails does Keon buy in all?



15. What property does the equation show?
- $$8 + 0 = 8$$
16. Each month for 6 months, Gisela completes 5 paintings. How many more paintings does she need to complete so that she has 38 paintings?

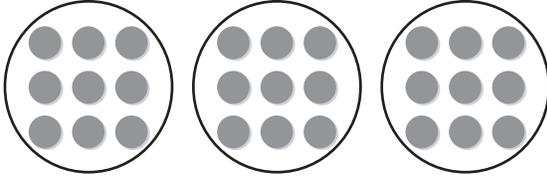
Represent Division with Bar Models

Go Online

Interactive Examples

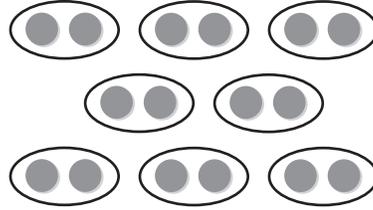
Write a division equation for the picture.

1.



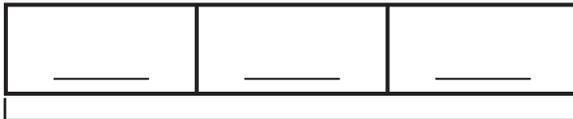
$$27 \div 3 = 9 \text{ or } 27 \div 9 = 3$$

2.



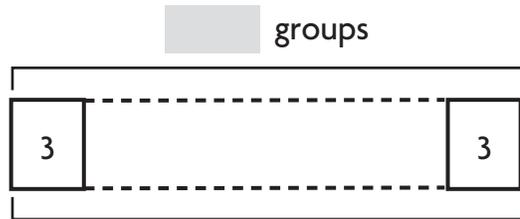
Complete the bar model to solve. Then write a division equation for the bar model.

3. There are 15 postcards in 3 equal stacks. How many postcards are in each stack?



15 postcards

4. There are 21 key rings. How many groups of 3 key rings can you make?



21 key rings

Problem Solving

5. Jalyn collected 24 stones. She put them in 4 equal piles. How many stones are in each pile?
6. Tyrese has 30 stickers. He puts 6 stickers on each page. On how many pages does he put stickers?

7. **WRITE**  *Math* Describe how to find the number of \$4 train tickets you can buy with \$32.

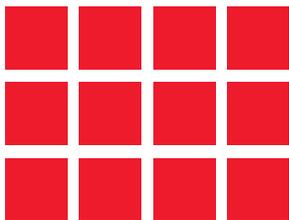
Lesson Check

8. Tai and a friend are stacking 24 blocks. They put the blocks in 3 equal stacks. How many blocks are in each stack?
9. Melissa made 45 greeting cards. She put them in 5 equal piles. How many cards did she put in each pile?

Spiral Review

10. Luz puts 1 stamp on each envelope. She puts stamps on 7 envelopes. How many stamps does Luz use?
11. A carnival ride has 8 cars. Each car holds 4 people. How many people are on the ride if all the cars are full?

12. Mr. Martinez's tomato garden has 3 rows with 4 tomato plants in each row. How many tomato plants are in his garden?
13. Justina has 516 pennies in a jar and 198 pennies in a bowl. How many pennies does Justina have? Use expanded form to find the sum.



Relate Subtraction and Division

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Interactive Examples

Write a division equation.

$$\begin{array}{r}
 16 \\
 - 4 \\
 \hline
 12
 \end{array}
 \begin{array}{r}
 12 \\
 - 4 \\
 \hline
 8
 \end{array}
 \begin{array}{r}
 8 \\
 - 4 \\
 \hline
 4
 \end{array}
 \begin{array}{r}
 4 \\
 - 4 \\
 \hline
 0
 \end{array}$$

$$16 \div 4 = 4$$

$$\begin{array}{r}
 20 \\
 - 5 \\
 \hline
 15
 \end{array}
 \begin{array}{r}
 15 \\
 - 5 \\
 \hline
 10
 \end{array}
 \begin{array}{r}
 10 \\
 - 5 \\
 \hline
 5
 \end{array}
 \begin{array}{r}
 5 \\
 - 5 \\
 \hline
 0
 \end{array}$$

Use repeated subtraction or a number line to solve.

3. $28 \div 7 = \underline{\hspace{2cm}}$

4. $18 \div 6 = \underline{\hspace{2cm}}$

5. $8 \overline{)40}$

6. $9 \overline{)36}$

Problem Solving

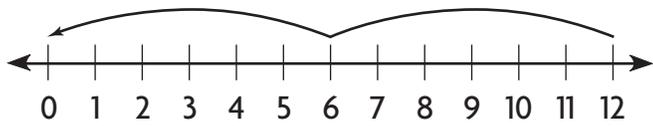
7. Mrs. Costa has 18 pencils. She gives 9 pencils to each of her children for school. How many children does Mrs. Costa have?

8. Boël decides to plant rose bushes in her garden. She has 24 bushes. She places 6 bushes in each row. How many rows of rose bushes does she plant in her garden?

9.  **WRITE** *Math* Explain why you can use subtraction to solve a division problem.

Lesson Check

10. What division equation is shown?



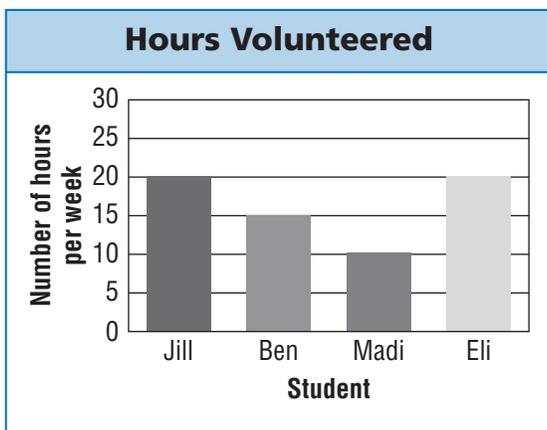
11. Isabella has 35 cups of dog food. She feeds her dogs 5 cups of food each day. For how many days will the dog food last?

Spiral Review

12. Lourdes buys 4 bags of oranges. There are 6 oranges in each bag. How many oranges does Lourdes buy?

13. Each month for 7 months, Samuel mows 3 lawns. How many more lawns does he need to mow if he wants to mow 29 lawns in all?

Use the graph for Problems 14 and 15.



14. How many hours did Eli volunteer in 5 weeks?

15. Madi and Jill volunteer for 6 weeks each. How many hours did they volunteer together?
