

3rd Grade American Math HW 15

Chapter 8: Understand Division

Dear Family,

During the next few weeks, our math class will be learning about division facts and strategies. We will learn strategies to use to divide by 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, and 12.

Vocabulary

- **Array:** An arrangement of objects in rows and columns.
- **Dividend:** The number that is to be divided in a division problem.
- **Divisor:** The number that divides the dividend.
- **Related Facts:** A set of related multiplication and division equations.
- **Quotient:** The number, not including the remainder, that results from division.

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- **Homework due date: Sunday, January 18th (Upload Homework on Archie)**
 - We will be using iPads to complete the work instead of the textbook. Please ensure that students bring an Apple Pencil (it does not have to be the original one) so they can write on their iPads. Chapter 8 can be found in GoodNotes, in the Classwork folder inside the Math folder. This way, students can always review and go back to what we did in class if needed.
 - **Feel free to contact me with any questions at diana.charaf@archimedean.org**

Complete homework daily based on the schedule provided below:

Monday 01/12	Pages: 321 - 339
Tuesday 01/13	Pages: 345 - 346
Wednesday 01/14	Pages: 351 - 352
Thursday 01/15	Pages: 357 - 363
Friday 01/16	Pages: 369



Represent Division

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?

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?

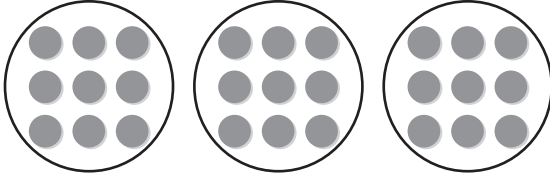
Represent Division with Bar Models

Go Online

Interactive Examples

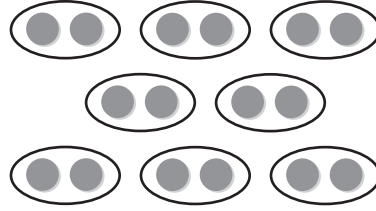
Write a division equation for the picture.

1.



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

2.



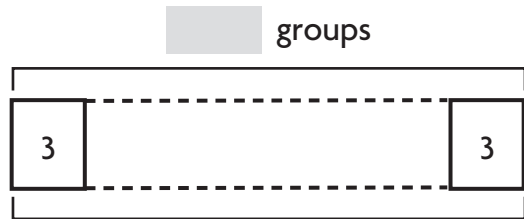
Complete the bar model to solve. Then write a division equation for the bar model.

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?

Relate Subtraction and Division

Go Online

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.

Read the question

3. $28 \div 7 =$ _____

4. $18 \div 6 =$ _____

5. $8 \overline{)40}$

6. $9 \overline{)36}$

Problem Solving

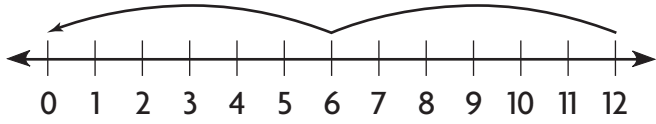
7. Mrs. Costa has 18 pencils. She gives 9 pencils to each of her children for school. How many children does Mrs. Costa have?
-

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?
-

Tip for number 10: Write the multiplication equation first, then use inverse operations to turn it into a division equation.

Lesson Check

10. What division equation is shown?



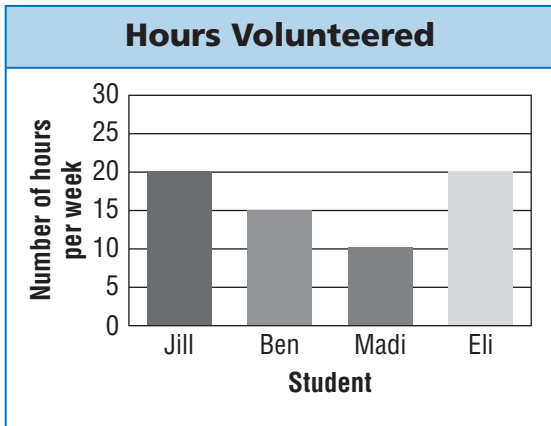
11. Isabella has 35 cups of dog food. She feeds her dogs 5 cups of food each day. For how many days will the dog food last?

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?

Represent Division with Arrays

Go Online

Interactive Examples

Use **square tiles to make an array**. Solve.

1. How many rows of 4 are in 12?

3 rows

2. How many rows of 3 are in 21?

Make an array. Then write a division equation.

3. 20 tiles in 5 rows

4. 28 tiles in 7 rows

Problem Solving

5. A dressmaker has 24 buttons. He needs 3 buttons to make one dress. How many dresses can he make with 24 buttons?

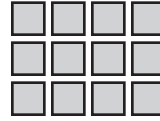
6. Liana buys 36 party favors for her 9 guests. She gives an equal number of favors to each guest. How many party favors does each guest get?

- 7.
- 
- Math*
- Draw an array to show how to arrange 20 chairs into 5 equal rows.

Lesson Check

8. Mr. Cortez places 24 desks in 6 equal rows. How many desks are in each row?

9. Which division equation is shown by the array?



Spiral Review

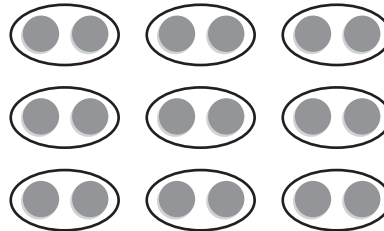
10. Amy has 2 rows of 4 sports trophies on each of her 3 shelves. How many sports trophies does Amy have?

11. What is the unknown factor?

$$9 \times p = 45$$

12. Alonso has 7 stacks with 4 quarters each. How many quarters does Alonso have?

13. Skip count. How many counters are there in all?

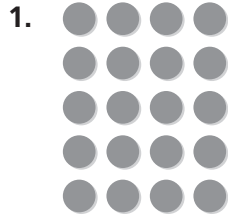


Relate Multiplication and Division

Go Online

Interactive Examples

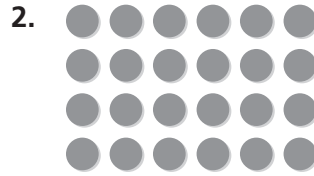
Complete.



$5 \text{ rows of } \underline{4} = 20$

$5 \times \underline{4} = 20$

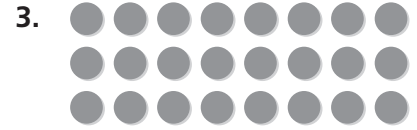
$20 \div 5 = \underline{4}$



$4 \text{ rows of } \underline{\quad} = 24$

$4 \times \underline{\quad} = 24$

$24 \div 4 = \underline{\quad}$



$3 \text{ rows of } \underline{\quad} = 24$

$3 \times \underline{\quad} = 24$

$24 \div 3 = \underline{\quad}$

Complete the equations.

4. $4 \times \underline{\quad} = 28$

$28 \div 4 = \underline{\quad}$

5. $6 \times \underline{\quad} = 36$

$36 \div 6 = \underline{\quad}$

6. $4 \times \underline{\quad} = 36 \div 3$

7. $8 \times \underline{\quad} = 2 \times 20$

Problem Solving

8. Mr. Martin buys 36 muffins for a class breakfast. He places them on plates for his students. If he places 9 muffins on each plate, how many plates does Mr. Martin use?
-
-
- _____

9. Rafael read 18 books during his summer vacation. He read the same number of books each month for 3 months. How many books did he read each month?
-
-
- _____

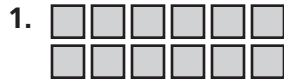
Name _____

Write Related Facts

Go Online

Interactive Examples

Write the related facts for the array.

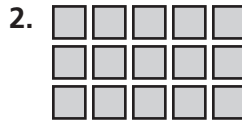


$2 \times 6 = 12$

$6 \times 2 = 12$

$12 \div 2 = 6$

$12 \div 6 = 2$



Write the related facts for the set of numbers.

4. 3, 7, 21

5. 2, 9, 18

6. 4, 8, 32

Problem Solving

7. T-shirts are on sale for \$5 each. Jamela has \$45 and wants to buy as many as she can. How many T-shirts can Jamela buy?

8. Mr. Moore has 21 feet of wallpaper. He cuts it into sections that are each 3 feet long. How many sections does Mr. Moore have?

Apply Division Rules for 1 and 0

Go Online

Interactive Examples

Find the quotient.

1. $3 \div 1 = \underline{3}$

2. $8 \div 8 = \underline{\quad}$

3. $\underline{\quad} = 0 \div 6$

4. $2 \div 2 = \underline{\quad}$

5. $\underline{\quad} = 9 \div 1$

6. $0 \div 2 = \underline{\quad}$

7. $0 \div 3 = \underline{\quad}$

8. $\underline{\quad} = 0 \div 4$

9. $7 \overline{)7}$

10. $1 \overline{)6}$

11. $9 \overline{)0}$

12. $1 \overline{)5}$

13. $1 \overline{)0}$

14. $4 \overline{)4}$

15. $1 \overline{)10}$

16. $2 \overline{)2}$

Problem Solving

17. There are no horses in the stables. There are 3 stables in all. How many horses are in each stable?

18. Jon has 6 kites. He and his friends will each fly 1 kite. How many people in all will fly a kite?
