

4

Cats or Dogs? The class voted and discovered that 16 students prefer dogs and 6 students prefer cats. Write the ratio of students who chose cats to those who chose dogs in all three ways. Be sure to simplify your ratio!

cats: dogs
 $6:16 = 3:8, \frac{3}{8}, 3 \text{ to } 8$

part to part

There are 15 candy canes and 25 snowmen in Veronica's yard as winter decorations. Write the ratio of candy to the total number of decorations all three ways. Be sure to simplify your ratio!

cc: total
 $15:40 = 3:8, \frac{3}{8}, 3 \text{ to } 8$

part to whole

Simplify the ratio: 60 to 96

60 to 96
 $5:8$

Simplify the ratio: 18 to 72

$\frac{18}{72} = \frac{1}{4}$

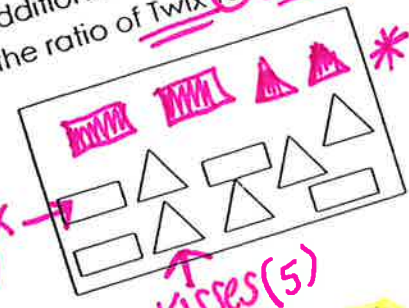
What operation do we use when simplifying?

Begin

Answer Key

5

Aunt Dede always has a candy bowl filled with Twix (rectangles) and Hershey kisses (triangles). Draw additional candies in the bowl below to make the ratio of Twix to total candy 6:13.



*Add 2 rectangles
*Add 2 kisses
(13-6=7 kisses needed)

STOP

Compare a Ratio to a proportion. similarities? differences? How are they connected?

Proportion - equation setting 2 ratios equal to each other

6

Solve for x: $\frac{120}{80} = \frac{15}{x}$ $x=10$

$75 \overline{)120} -120 \underline{0}$

7

Solve for x: $\frac{28}{35} = \frac{x}{75}$ $x=4$

8

min day $\frac{45 \times 7}{1 \times 7} = \frac{m}{7}$ $m=315$ minutes

Solve for x: $\frac{9 \times 9}{11 \times 9} = \frac{x}{99}$ $x=81$

10

LeBron James made 1 three-point shot out of the 5 he attempted in the game vs. the Pelicans last week. If he continued to shoot at this rate, how many shots would he need to attempt to make 4 three-point shots?

made attempts $\frac{1 \times 4}{5 \times 4} = \frac{4}{a}$ $a=20$

20 attempted shots

Addison spends about 45 minutes per day on Instagram. At this rate, how many minutes will she spend on Instagram in a week? (1 week = 7 days)

Proportion Plaza

teacher check

Explain how you solve for a variable in a proportion. How do you know where each number goes?

STOP

*Look at known relationship to determine multiplier. Similar to the ratio equiv.

teacher check

Miss Vinborg earned a \$135 paycheck from Justice after working 15 hours over Thanksgiving break. What is Miss Vinborg's hourly rate of pay?

13

$$\frac{\text{money}}{\text{hrs. worked}} = \frac{135}{15} = 9$$

$m = \$9.00 \text{ per hour}$

Complete the rate table below to show the relationship between the miles Mrs. Potts can drive and gallons of gas.

Miles	14	28	56	140
Gallons	.5	1	2	5

12

$$\frac{\text{miles}}{\text{gal.}} = \frac{28}{1} = 28$$

$$\frac{28}{1} \times 5 = 140$$

Grandma is decorating her windows with snowflake decals for the holidays. She has 96 total decals and wants each of the 8 window panes to have the same number of decals. What is the unit rate for one window pane? Write a comparison statement using "for every" or "per" to describe the relationship.

11

$$\frac{\text{decals}}{\text{windows}} = \frac{96}{8} = 12$$

$d = 12 \text{ decals}$

* 12 decals per window
* For every 1 window, there are 12 decals

Miss Vinborg is making sugar cookies for a Cookie Party! Complete the rate table below to show the relationship between the amount of flour and sugar she needs for the recipe.

Flour (cups)	Sugar (cups)
3	1
6	2
12	4
18	6
24	8

15

A 20 oz. bottle of Coca-cola contains 65 grams of sugar. A 34 oz. bottle of Mountain Dew contains 119 grams of sugar. Which soda contains more sugar per ounce?

16

Coke: $\frac{65}{20} = 3.25$ gr. sugar per oz.

M.D.: $\frac{119}{34} = 3.5$ gr. sugar per oz.

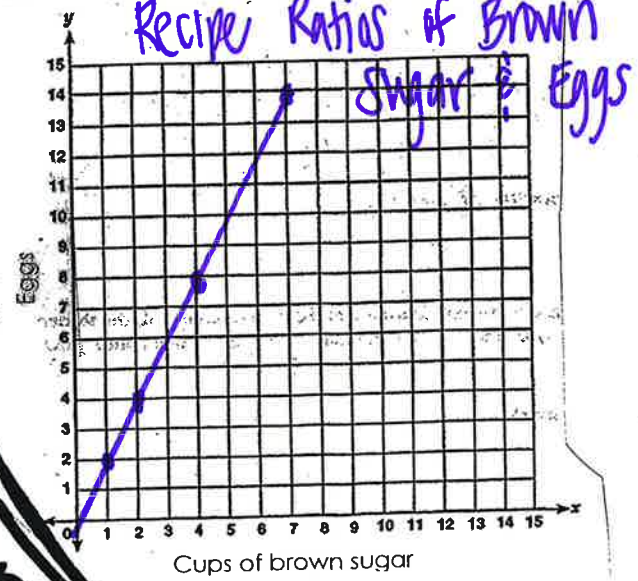
Mountain Dew contains more sugar per oz.

A recipe calls for 4 eggs for every 2 cups of brown sugar. Complete the table to show this ratio. Then, state what the coordinates would be.

Brown sugar (x)	Eggs (y)
1	2
2	4
4	8
7	14

17

Using the completed table from Question #16, plot the equivalent ratios as ordered pairs on the coordinate grid.



This tape diagram shows the relationship between the number of origami cranes Kristen can make compared to the number of hours she worked. What is the ratio between the number of origami cranes Kristen can make per hour?

Cranes	1	2	3	4	5	6	7	8	9	10	11	12
Hours	1					2					3	

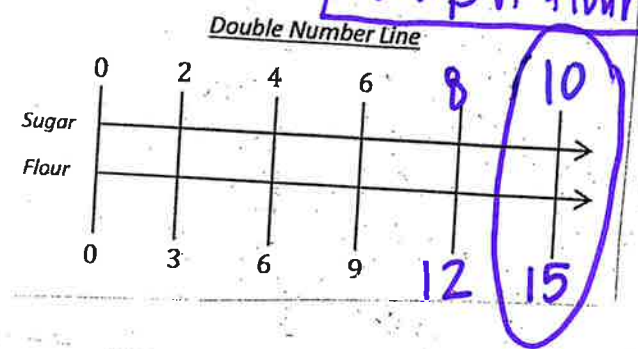
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$$\frac{\text{Cranes}}{\text{hr.}} = \frac{12}{3} = 4$$

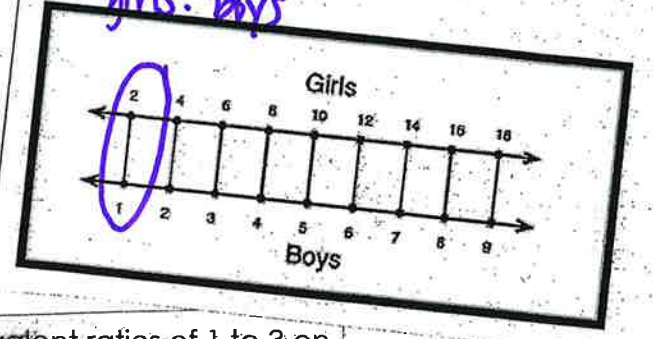
$c = 4 \text{ cranes per hr.}$

20

How many cups of flour will be needed when using 10 cups of sugar?

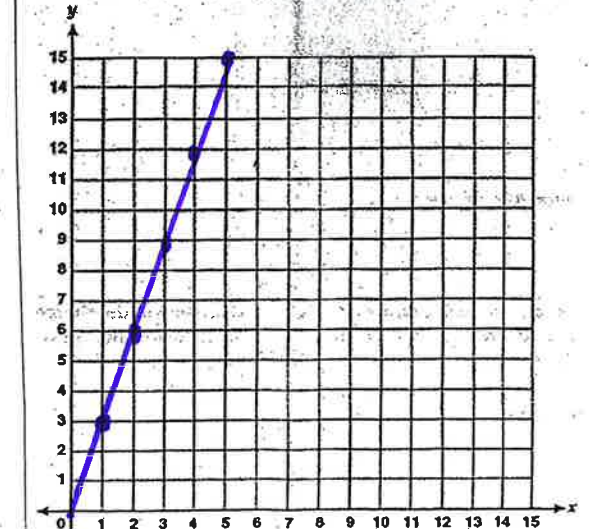


What ratio is shown by these double number lines? $2:1$ girls: boys



18

Graph the first five equivalent ratios of 1 to 3 on the coordinate grid shown. [1 to 3 = (1,3)]



- $1:3$
- $(1,3)$
- $(2,6)$
- $(3,9)$
- $(4,12)$
- $(5,15)$