

Classroom Exercises

Express the ratio in simplest form.

1. $\frac{12}{20}$

2. $\frac{3p}{5p}$

3. $\frac{4n}{n^2}$

4. $\frac{n^2}{4n}$

5. Is the ratio $a:b$ always, sometimes, or never equal to the ratio $b:a$? Explain.
6. An office copy machine can make a reduction to 90%, thus making the copy slightly smaller than the original. What is the ratio of the length of a line of text in the original to the length of a copy of that line?
7. Barbara is making oatmeal for breakfast. The instructions say to use 3 cups of water with 2 cups of oatmeal.
- What is the ratio of water to oatmeal?
 - If Barbara uses 6 cups of water, how much oatmeal does she need?

Express the ratio in simplest form.

8. $DI:IS$

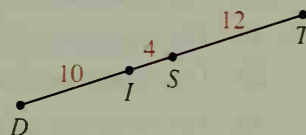
9. $ST:DI$

10. $IT:DT$

11. $DI:IT$

12. $IT:DS$

13. $IS:DI:IT$

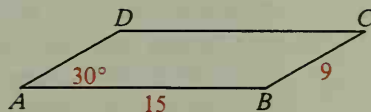


14. What is the ratio of 750 mL to 1.5 L?
15. Can you find the ratio of 2 L to 4 km? Explain.
16. The ratio of the lengths of two segments is 4:3 when they are measured in centimeters. What is their ratio when they are measured in inches?
17. Three numbers aren't known, but the ratio of the numbers is 1:2:5. Is it possible that the numbers are 1, 2, and 5? 10, 20, and 50? 3, 6, and 20? x , $2x$, and $5x$?
18. What is the second term of the proportion $\frac{a}{b} = \frac{x}{y}$?

Written Exercises

$ABCD$ is a parallelogram. Find the value of each ratio.

- A
- $AB:BC$
 - $AB:CD$
 - $m\angle C:m\angle D$
 - $m\angle B:m\angle C$
 - AD :perimeter of $ABCD$



In Exercises 6–14, $x = 12$, $y = 10$, and $z = 24$. Write each ratio in simplest form.

- x to y
- z to x
- $x + y$ to z
- $\frac{x}{x+z}$
- $\frac{x+y}{z+y}$
- $\frac{y+z}{x-y}$
- $x:y:z$
- $z:x:y$
- $x:(x+y):(y+z)$