

Equivalent fractions



Decide whether two fractions are equivalent, and find a missing numerator or denominator.

Name _____

Date _____

Same value, different look

Two fractions are equivalent if they represent the same amount. Multiply (or divide) the numerator AND denominator by the same number to find an equivalent fraction – never just one of them. A stacked bar or circle diagram shows this: the same shaded length or area, cut into finer or coarser parts.

Worked example Compare $\frac{1}{2}$ and $\frac{2}{4}$ using the bars. Are they equivalent?



Both bars have the same shaded length.
Yes: $\frac{1}{2} = \frac{2}{4}$ (multiply top and bottom by 2).

1. Are the bars equivalent?



2. Are the circles equivalent?



3. What does “equivalent fractions” mean?

4. Write a fraction equivalent to $\frac{3}{4}$.

5. Fill in the blank: $\frac{2}{5} = \frac{\square}{10}$.

6. Fill in the blank: $\frac{3}{7} = \frac{\square}{21}$.

7. Are $\frac{4}{6}$ and $\frac{2}{3}$ equivalent? Explain.

8. Are $\frac{5}{8}$ and $\frac{15}{24}$ equivalent?

9. Which fraction is equivalent to $\frac{3}{5}$: $\frac{6}{9}$, $\frac{9}{15}$, or $\frac{6}{15}$?

Equivalent fractions (continued)



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10. Use the bars to confirm $\frac{3}{5} = \frac{6}{10}$.



11. Fill in the blank: $\frac{4}{9} = \frac{12}{\square}$.

12. Write two different fractions equivalent to $\frac{5}{6}$.

13. Fill in both blanks: $\frac{\square}{12} = \frac{2}{3} = \frac{16}{\square}$.

14. A student says $\frac{3}{4}$ and $\frac{9}{16}$ are equivalent because $3 \times 3 = 9$. Are they correct? Explain.

15. Which does not belong: $\frac{2}{3}$, $\frac{4}{6}$, $\frac{6}{9}$, $\frac{8}{10}$? Explain.

16. One fraction is $\frac{5}{8}$. Write three different equivalent fractions.

17. Are $\frac{12}{18}$ and $\frac{2}{3}$ equivalent? Justify using a scale factor.

18. Write your own pair of equivalent fractions and explain how you know.

