

Simplifying fractions

Divide the numerator and denominator by their highest common factor to write a fraction in simplest form.



Name _____

Date _____

Highest common factor

To simplify a fraction, find the highest common factor (HCF) of the numerator and denominator, then divide both by it. A fraction is in simplest form when the HCF of its numerator and denominator is 1 – no number bigger than 1 divides both exactly.

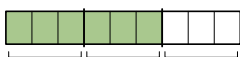
Worked example Simplify $\frac{6}{8}$ using the bar.



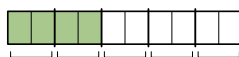
The heavy lines bundle the eighths into pairs: eight eighths become four quarters.

$$\frac{6}{8} \div \frac{2}{2} = \frac{3}{4}.$$

1. What does this bar simplify to?



2. What does this bar simplify to?



3. What does “simplify a fraction” mean?

4. Simplify $\frac{4}{8}$.

5. Simplify $\frac{6}{10}$.

6. Simplify $\frac{9}{12}$.

7. Simplify $\frac{15}{20}$.

8. Is $\frac{7}{9}$ already in simplest form?

9. Fill in the blank: $\frac{8}{12} = \frac{2}{\square}$.

Simplifying fractions (continued)

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10. What does this bar simplify to?



11. Simplify $\frac{21}{28}$.

12. Simplify $\frac{18}{45}$.

13. Is $\frac{16}{24} = \frac{2}{3}$ correct?

14. Which is simpler: $\frac{12}{16}$ or $\frac{3}{4}$?

15. Explain how you know $\frac{10}{14}$ is not in simplest form.

16. Two students simplify $\frac{24}{36}$: one divides by 12; the other divides by 2, then 3, then 2. Show both reach the same result.

17. Fill in both blanks: $\frac{\square}{15} = \frac{3}{5} = \frac{27}{\square}$.

18. Explain why $\frac{11}{13}$ is already in simplest form.
