Unit 6 · Fractions and Equivalent Fractions Cheat Sheet

Unit 6 focus: equivalent fractions and simplest form

1 Big Idea

Equivalent fractions name the same amount with different-sized pieces. Multiply or divide the top and bottom by the same number.

2 Important Vocabulary

numerator	The top number. It tells how many parts you have.	In $\frac{3}{4}$, the numerator is 3
denominator	The bottom number. It tells how many equal parts make one whole.	In $\frac{3}{4}$, the denominator is 4
equivalent fractions	Fractions that name the same amount.	$\frac{1}{2} = \frac{2}{4} = \frac{4}{8}$
simplest form	A fraction whose numerator and denominator have no common factor except 1.	$\frac{6}{8} = \frac{3}{4}$

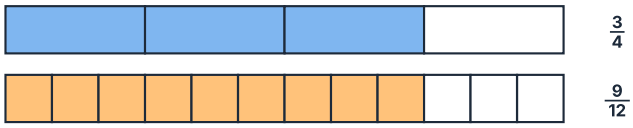
3 How It Works

Write $\frac{3}{4}$ with a denominator of 12.

Example: $4 \times 3 = 12$, so multiply the numerator by 3 too.
Denominator: $4 \times 3 = 12$
Numerator: $3 \times 3 = 9$

Answer: $\frac{3}{4} = \frac{9}{12}$

4 Visual Model



The same amount is shaded. Each fourth was cut into 3 twelfths.

5 ★ Remember This · Watch Out!

★ Remember this

- Multiply or divide BOTH parts by the same number.
- To simplify, divide both parts by a common factor: $\frac{6}{8} = \frac{3}{4}$.

⚠ Watch out!

- **Do not add:** $\frac{2}{3}$ is not $\frac{3}{4}$
- **Change both parts:** $\frac{3}{4}$ is not $\frac{3}{12}$

6 Try It!

1. $\frac{2}{5} = ?/10$
   Answer: 4
2. Write $\frac{8}{12}$ in simplest form.
   Answer: $\frac{2}{3}$

Answers are printed upside down. Turn the page to check!

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More practice: comparing and ordering fractions

1 Big Idea

Compare fractions with a common denominator, a common numerator, or a benchmark such as $\frac{1}{2}$.

2 Important Vocabulary

benchmark fraction	A familiar fraction used to compare, such as 0, $\frac{1}{2}$ or 1.	$\frac{5}{8}$ is a little more than $\frac{1}{2}$
common denominator	The same denominator for two or more fractions.	$\frac{1}{2}$ and $\frac{1}{3}$ → $\frac{3}{6}$ and $\frac{2}{6}$
compare	Decide which fraction is greater, or whether they are equal.	$\frac{3}{4} > \frac{2}{3}$
unit fraction	A fraction with a numerator of 1.	$\frac{1}{6}$

3 How It Works

Compare $\frac{2}{3}$ and $\frac{3}{4}$.

Example: Use a common denominator of 12.

$\frac{2}{3} = \frac{8}{12}$

$\frac{3}{4} = \frac{9}{12}$

Compare: $8 < 9$

Answer: $\frac{2}{3} < \frac{3}{4}$

4 Visual Model



$\frac{3}{8}$ is less than $\frac{1}{2}$ and $\frac{5}{8}$ is more than $\frac{1}{2}$, so $\frac{3}{8} < \frac{5}{8}$.

5 Remember This · Watch Out!

Remember this

- Same denominator: compare numerators.
- Same numerator: the smaller denominator has bigger pieces.

Watch out!

- **Bigger denominator, smaller pieces:** $\frac{1}{8} < \frac{1}{6}$
- **Same whole:** only compare fractions of the same whole

6 Try It!

1. Compare with <, > or =: $\frac{3}{5}$ and $\frac{3}{8}$

   Answer: $>$

2. Order from least to greatest: $\frac{1}{2}$, $\frac{5}{6}$, $\frac{1}{3}$

   Answer: $\frac{1}{3}, \frac{1}{2}, \frac{5}{6}$

Answers are printed upside down. Turn the page to check!