Equivalent Fractions (4-3)

equivalent fractions	Decode
Definition	Example $\frac{3}{7} \cdot \frac{3}{3} = \frac{9}{21}$

simplest form	Decode
Definition When the GCF of the numerator & denominator is 1	Example $\frac{12 \div 3}{15 \div 3} = \frac{4}{5}$

Example 1. Write two fractions equivalent to each of the fractions.

I Do	You Do
$\frac{6}{9} \div 3 \div 3 = \frac{2}{3}$ $\frac{6 \cdot 4}{9 \cdot 4} = \frac{24}{36}$	$\frac{12}{20} \div 2 = \frac{6}{10}$ $\frac{6}{10} \div 2 = \frac{3}{5}$

Example 2. Write each fraction in simplest form.

I Do	We Do
$\frac{27}{42} \div 3 \div 3 = \frac{9}{14}$	$\frac{28}{49} \div 7 \div 7 = \frac{4}{7}$

Example 3. Jaden has a bag full of 18 red marbles, 6 green marbles, and 14 blue marbles.

I Do	You Do
What is the ratio of red marbles to green marbles? $\frac{18 \div 3}{6 \div 3} = \frac{6 \div 2}{2 \div 2} = \frac{3}{1} = 3$	What is the ratio of blue marbles to red marbles? $\frac{14}{18} \div 2 = \frac{7}{9}$

IXL Lessons: 7th Grade → F.1, F.2, F.3, F.4

7:9

7 to 9

18:6

÷6

3:1

Example 4. Simplify each fraction.

I Do	We Do
$\frac{15bcd}{12b} \div 3 \div 3 = \frac{5 \cdot b \cdot c \cdot d}{4 \cdot b}$ $\frac{5cd}{4}$	$\frac{36w}{48w^2} \div 12 \div 12 = \frac{3w}{4 \cdot w \cdot w}$ $\frac{3}{4w}$

We Do	You Do
$\frac{9x^3}{6x} \div 3 \div 3 = \frac{3 \cdot x \cdot x \cdot x}{2 \cdot x}$ $\frac{3x^2}{2}$	$\frac{49t^3}{7t^5} \div 7 \div 7 = \frac{7 \cdot t \cdot t \cdot t}{t \cdot t \cdot t \cdot t \cdot t}$ $\frac{7}{1t^2}$ $\frac{7}{t^2}$

$\frac{3}{3} = 1$ $\frac{3}{3} = 1$ $\frac{x}{x} = 1$

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