Determining Equivalent Fractions

Method 1 : Cross Products Test

If the products of cross-multiplication are the same, the fractions are equivalent.

Example: Fractions

Cross Products Test

$7 \cdot 4 = 28$ $\qquad \frac{7}{14} = \frac{2}{4}$ $\qquad 2 \cdot 14 = 28$

Example: Fractions Containing Decimals

Cross Products Test

$3.2 \cdot 0.24 = 0.768$ $\qquad \frac{3.2}{4.8} = \frac{0.16}{0.24}$ $\qquad 4.8 \cdot 0.16 = 0.768$

Example: Mixed Numerals / Improper Fractions

Cross Products Test

$4\frac{2}{3} \cdot 16\frac{1}{3} = \frac{14}{3} \cdot \frac{49}{3} = \frac{686}{9}$ $\qquad \frac{4\frac{2}{3}}{32\frac{2}{3}} = \frac{2\frac{1}{3}}{16\frac{1}{3}}$ $\qquad 32\frac{2}{3} \cdot 2\frac{1}{3} = \frac{98}{3} \cdot \frac{7}{3} = \frac{686}{9}$

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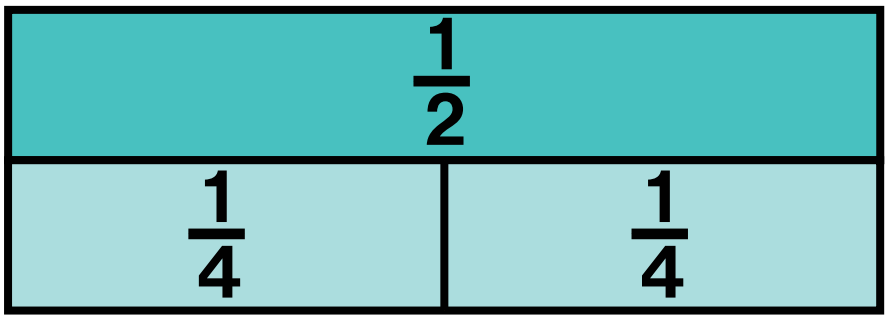
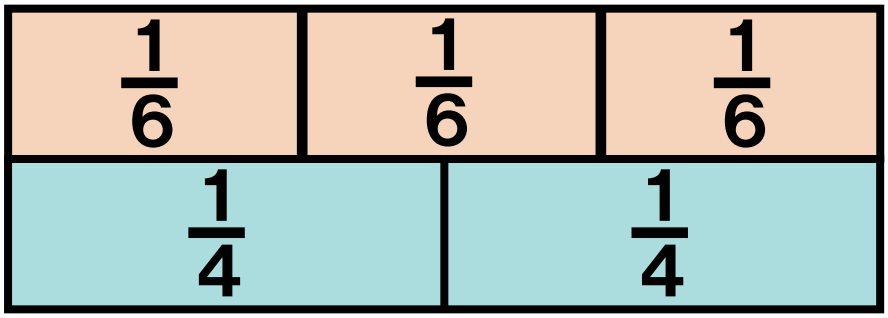
Method 2 : Fraction Bars

Fraction bars can be used to detemine if fractions are equivalent; however, this method is limited by the length of the fractions bars.

$$\frac{1}{2} = \frac{2}{4}$$



$$\frac{3}{6} = \frac{2}{4}$$



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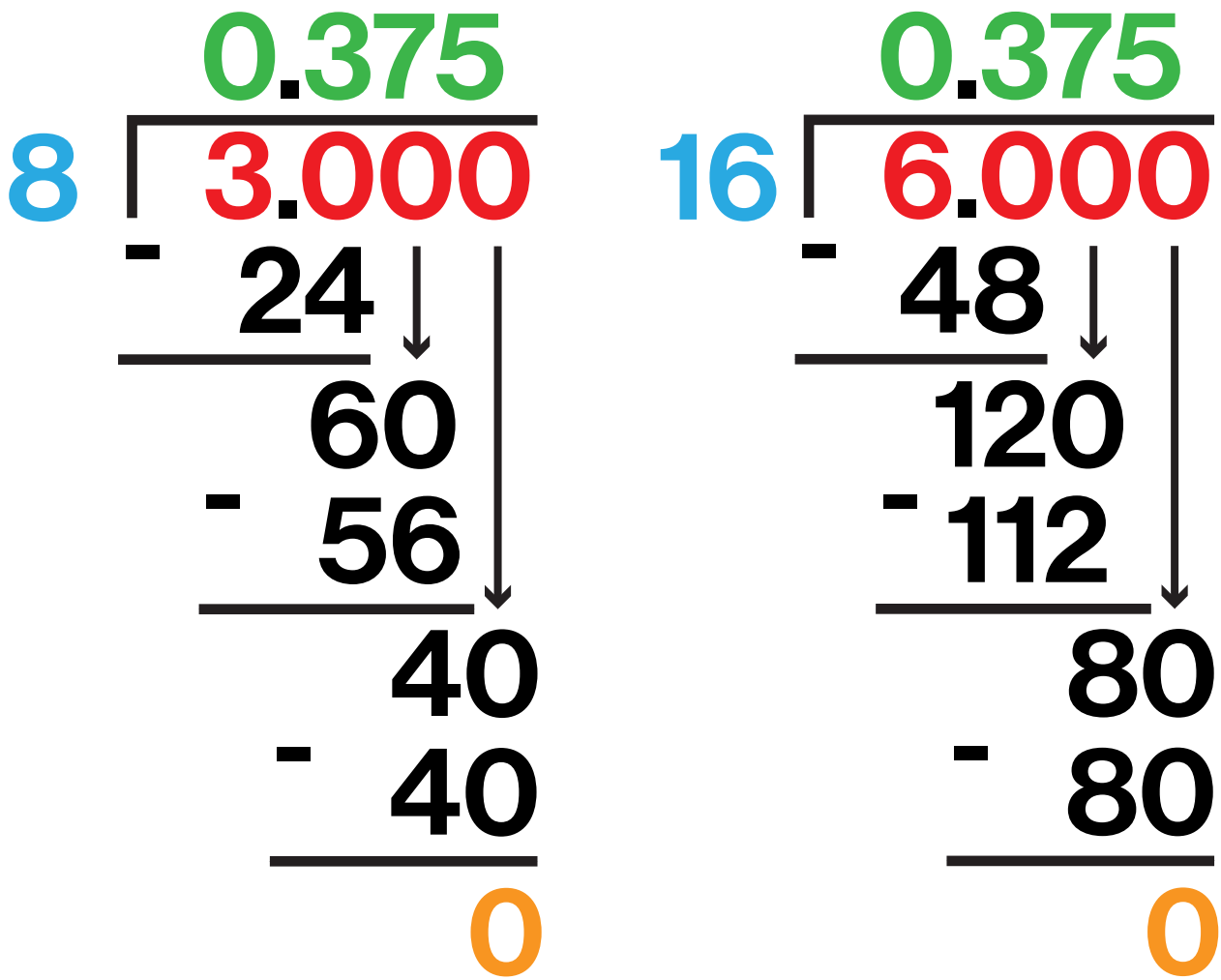
Method 3 : Long Division

Long division converts fractions directly into easy-to-compare decimal values.

$$\frac{3}{8} = \frac{6}{16}$$



$$0.375 = 0.375$$