

Fractions lesson 3 - Multiplying Fractions

Magic Monk Tutorials

1 Evaluate the following fractions.

$$1.1 \quad \frac{3}{4} \cdot \frac{8}{3}$$

$$\frac{3}{4} \cdot \frac{8}{3} = \frac{3 \cdot 8}{4 \cdot 3} = \frac{24}{12} = \frac{24 \div 12}{12 \div 12} = 2$$

$$1.2 \quad \frac{1}{2} \cdot \frac{2}{4}$$

$$\frac{1}{2} \cdot \frac{2}{4} = \frac{1 \cdot 2}{2 \cdot 4} = \frac{2}{8} = \frac{1}{4}$$

$$1.3 \quad \frac{6}{7} \cdot \frac{7}{6}$$

$$\frac{6}{7} \cdot \frac{7}{6} = \frac{6 \cdot 7}{7 \cdot 6} = \frac{42}{42} = 1$$

$$1.4 \quad \frac{1}{6} \cdot \frac{4}{3}$$

$$\frac{1}{6} \cdot \frac{4}{3} = \frac{1 \cdot 4}{6 \cdot 3} = \frac{4}{18} = \frac{2}{9}$$

$$1.5 \quad \frac{4}{5} \cdot \frac{20}{17}$$

$$\frac{4}{5} \cdot \frac{20}{17} = \frac{4 \cdot 20}{5 \cdot 17}$$

At this point, we can divide the numerator and denominator by 5 to simplify.

$$= \frac{4 \cdot 20 \div 5}{5 \cdot 17 \div 5} = \frac{4 \cdot 4}{17} = \frac{16}{17}$$

$$1.6 \quad \frac{123}{234} \cdot \frac{13}{41}$$

$$\frac{123}{234} \cdot \frac{13}{41} = \frac{123 \cdot 13}{234 \cdot 41}$$

Now note that $234=18 \cdot 13$ and $123=3 \cdot 41$. The fraction can therefore be simplified to the following

$$= \frac{3 \cdot 41 \cdot 13}{18 \cdot 13 \cdot 41} = \frac{3}{18}$$