

Name:

Period:

Notes 2-6

Int 1

Multiply/Divide Fractions

Unit 2

Multiply Fractions:

• Multiply straight across!

* You do NOT Need Common denominators.

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

3

Simplify!

$$\frac{1}{9}$$

Ex. 1: $\frac{2}{1} \cdot \left(\frac{-3}{4}\right) = -\frac{6 \div 2}{4 \div 2} = \left(\frac{-3}{2}\right)$

Ex. 3: $\frac{3}{5} \cdot \left(\frac{-1}{2}\right) = \left(\frac{-3}{10}\right)$

Ex. 2: $\frac{-2}{7} \cdot \frac{3}{8} = \left(\frac{-3}{28}\right)$

Ex. 4: $\frac{-1}{3} \cdot \left(\frac{-3}{7}\right) = \left(\frac{1}{7}\right)$

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Change Mixed Numbers to IMPROPER FRACTIONS:

Must change to Improper!

$$4\frac{2}{5}$$

Diagram showing the conversion of the mixed number $4\frac{2}{5}$ to an improper fraction. A blue arrow points from the denominator 5 to the numerator 2, with a plus sign above it. A red arrow points from the whole number 4 down to the denominator 5, with a plus sign below it. The denominator 5 is circled in red.

$$4 \cdot 5 = 20 + 2 = \frac{22}{5}$$

Ex. 5: $\frac{1}{2} \cdot 4\frac{2}{5}$

$$1 \frac{1}{2} \cdot \frac{22}{5} = \left(\frac{11}{5}\right)$$

Ex. 7: $5\frac{1}{3} \cdot 3$

Ex. 6: $\frac{1}{4} \cdot 8\frac{4}{9}$ $72+4$ $2\sqrt{76}$ $2\sqrt{38}$

$$1 \frac{1}{2} \cdot \frac{76}{9} = \frac{38}{9} = 2\frac{1}{9}$$

Ex. 8: $-1\frac{7}{8} \cdot \left(-2\frac{2}{5}\right)$

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Divide Fractions:

Keep. CHANGE. FLIP.
 the first fraction. \div to \cdot the 2nd fraction

Ex. 9: $3 \div \frac{1}{4}$

$$\frac{3}{1} \cdot \frac{4}{1} = \frac{12}{1} = \textcircled{12}$$

Ex. 11: $\frac{3}{4} \div \left(-\frac{1}{2}\right)$

$$\frac{3}{4} \cdot \frac{2}{1} = -\frac{6 \div 2}{4 \div 2} = \textcircled{-\frac{3}{2}}$$

Ex. 10: $\frac{1}{3} \div \frac{5}{1}$

$$\frac{1}{3} \cdot \frac{1}{5} = \textcircled{\frac{1}{15}}$$

Ex. 12: $-\frac{3}{4} \div \frac{1}{4}$

$$\begin{aligned} \cancel{\frac{-3}{4}} \cdot \frac{4}{1} &= \textcircled{-\frac{3}{1}} = \textcircled{-3} \\ -\frac{12 \div 4}{4 \div 4} &= \textcircled{-\frac{3}{1}} \end{aligned}$$