

# Multiplying & Dividing Rational Numbers Part 2

October-06-16

8:46 AM

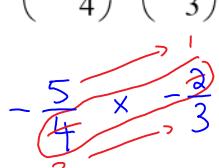
## Mathematics 9 Rational Numbers Multiplying & Dividing Rational Numbers Part 2

### A. Multiplying Rational Numbers Continued

Multiplying  
Signs Same = Positive  
Signs Different = Negative

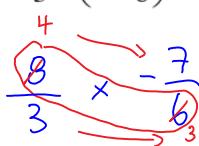
It is generally easiest if you change the Mixed Numbers into Improper Fractions before beginning to multiply. Remember to pay particular attention signs and to the integer rules when working with the numbers.

$$\left(-1\frac{1}{4}\right) \times \left(-\frac{2}{3}\right)$$



$$= \boxed{\frac{5}{6}}$$

$$2\frac{2}{3} \times \left(-1\frac{1}{6}\right)$$



$$= \boxed{-\frac{28}{9} \text{ or } -3\frac{1}{9}}$$

## B. Dividing Rational Numbers

It is generally easiest if you change the Mixed Numbers into Improper Fractions before beginning to divide. Remember the KFC rule to change the division question into a multiplication question. Then just follow basic rules of multiplying fractions. **Remember to pay particular attention signs and to the integer rules when working with the numbers.**

$$\left(-2\frac{3}{4}\right) \div \frac{4}{5}$$

$$-\frac{11}{4} \div \frac{4}{5}$$

$$-\frac{11}{4} \xrightarrow{\text{X}} \frac{5}{4} = -\frac{55}{16} \text{ or } -3\frac{7}{16}$$

$$3\frac{1}{5} \div \left(-2\frac{3}{6}\right)$$

$$\begin{array}{r} 3 \\ 16 \\ \times 6 \\ \hline 96 \end{array}$$

$$\begin{array}{r} 2 \\ 15 \\ \times 5 \\ \hline 75 \end{array}$$

$$\frac{16}{5} \div -\frac{15}{6}$$

$$\frac{16}{5} \xrightarrow{\text{X}} -\frac{6}{15}$$

$$= -\frac{96}{75} \xrightarrow{\div 3} = -\frac{32}{25} \text{ or } -1\frac{9}{25}$$

## C. Practice Questions

$$1) \left(-1\frac{1}{2}\right) \times \frac{4}{5}$$

$$\begin{array}{r} -3 \\ 2 \\ \times 4 \\ \hline 1 \end{array}$$

$$= -\frac{6}{5} \text{ or } -1\frac{1}{5}$$

$$2) \left(-2\frac{1}{3}\right) \div \left(-\frac{9}{12}\right)$$

$$\begin{array}{r} -7 \\ 3 \\ \times -9 \\ \hline 1 \end{array}$$

$$= \frac{28}{9} \text{ or } 3\frac{1}{9}$$

$$3) 2\frac{2}{3} \times 1\frac{1}{4}$$

$$\begin{array}{r} 8 \\ 3 \\ \times 5 \\ \hline 4 \end{array}$$

$$= \frac{10}{3} \text{ or } 3\frac{1}{3}$$

Assignment: Multiplying & Dividing Rational Numbers Part 2 Assignment

Name: \_\_\_\_\_

Multiplying & Dividing Rational Numbers Part 2

$$1. \quad \frac{1}{3} \times \left(-1\frac{1}{2}\right)$$

$$2. \quad \left(-\frac{5}{8}\right) \times 1\frac{1}{5}$$

$$3. \quad \left(-1\frac{1}{8}\right) \div \left(-1\frac{1}{3}\right)$$

$$4. \quad \left(-\frac{8}{9}\right) \div 2\frac{1}{2}$$

$$5. \quad 2\frac{3}{6} \times \frac{8}{9}$$

$$6. \quad \left(-1\frac{4}{5}\right) \div \left(-2\frac{2}{5}\right)$$

$$7. \quad 2\frac{1}{2} \div \left(-3\frac{1}{4}\right)$$

$$8. \quad \left(-3\frac{1}{5}\right) \times 2\frac{1}{4}$$

$$9. \left(-1\frac{5}{8}\right) \div 2\frac{1}{8}$$

$$10. \ 4\frac{1}{2} \times 3\frac{1}{3}$$

$$11. \left(-3\frac{1}{2}\right) \times \left(-2\frac{1}{2}\right)$$

$$12. \ 3\frac{3}{5} \div \left(-1\frac{3}{7}\right)$$

$$13. \left(-\frac{9}{11}\right) \div 3\frac{3}{4}$$

$$14. \ 4\frac{5}{6} \times \frac{6}{15}$$

$$15. \ 2\frac{4}{5} \times \left(-1\frac{1}{4}\right)$$

$$16. \ \left(-5\frac{1}{2}\right) \div \left(-2\frac{5}{6}\right)$$

**Answers**

1.  $-\frac{1}{2}$

2.  $-\frac{3}{4}$

3.  $\frac{27}{32}$

4.  $-\frac{16}{45}$

5.  $\frac{20}{9}$

6.  $\frac{3}{4}$

7.  $-\frac{10}{13}$

8.  $-\frac{36}{5}$

9.  $-\frac{13}{17}$

10. 15

11.  $\frac{35}{4}$

12.  $-\frac{63}{25}$

13.  $-\frac{12}{55}$

14.  $\frac{29}{15}$

15.  $-\frac{7}{2}$

16.  $\frac{33}{17}$