

Lesson 5.6C ~ Multiplying and Dividing Whole Numbers and Fractions

Name _____ Period _____ Date _____

The associative property of multiplication: When three or more factors are multiplied, the product is the same no matter the order the factors are multiplied.

EXAMPLE: $\frac{1}{2} \times 6 \times \frac{1}{4} = \left[\frac{1}{2} \times 6 \right] \times \frac{1}{4} = 3 \times \frac{1}{4} = \frac{3}{4}$ **OR**

$$\frac{1}{2} \times 6 \times \frac{1}{4} = \frac{1}{2} \times \left[6 \times \frac{1}{4} \right] = \frac{1}{2} \times \frac{6}{4} = \frac{3}{4}$$

Solve each problem, showing your work.

1. $2 \times \frac{1}{8} \times 3$

2. $6 \times \frac{1}{2} \times \frac{3}{4}$

3. $4 \times \frac{5}{8} \times 5$

4. $9 \times \frac{2}{3} \times \frac{3}{8}$

5. $7 \times 5 \times \frac{3}{7}$

6. $\frac{3}{5} \times \frac{4}{7} \times 6$

When multiplying three or more fractions and whole numbers, simplify before multiplying across.

EXAMPLE: $4 \times \frac{3}{8} \times \frac{1}{3} = \frac{\cancel{4}^1}{1} \times \frac{\cancel{3}_3}{\cancel{8}_2} \times \frac{1}{\cancel{3}_1} = \frac{1 \times 1 \times 1}{1 \times 2 \times 1} = \frac{1}{2}$

Solve each problem by simplifying before multiplying.

7. $9 \times \frac{1}{3} \times 3$

8. $5 \times 2 \times \frac{3}{10}$

9. $\frac{3}{4} \times \frac{4}{7} \times 7$

10. $4 \times \frac{1}{3} \times \frac{3}{5}$

11. $7 \times 5 \times \frac{7}{10}$

12. $\frac{3}{10} \times \frac{5}{6} \times 12$