

Name: \_\_\_\_\_ Period: \_\_\_\_\_ Date: \_\_\_\_\_

## Properties of Real Numbers Exit Quiz

Using the properties of real numbers, simplify the following expressions:

1.  $\frac{3}{4}(5a + 2) - \frac{1}{2}(3a - 5)$

2.  $-\frac{2}{5}(2x + 3) + \frac{3}{4}(3x - 7)$

3.  $7 - 2(5n - 8m)$

4.  $3(2a - 4b) - 4(a - 3b)$

5.  $6 + 3[2x - 4(3x - 2)]$

# Properties of Real Numbers Exit Quiz

**ANSWER**

Using the properties of real numbers, simplify the following expressions:

$$\begin{aligned}
 1. \quad & \frac{3}{4}(5a + 2) - \frac{1}{2}(3a - 5) \\
 &= \frac{3}{4}(5a + 2) - \frac{2}{4}(3a - 5) \\
 &= \frac{15a + 6}{4} - \frac{6a - 10}{4} \\
 &= \frac{15a + 6 - 6a + 10}{4} \\
 &= \frac{9a + 16}{4}
 \end{aligned}$$

$$\begin{aligned}
 2. \quad & -\frac{2}{5}(2x + 3) + \frac{3}{4}(3x - 7) \\
 &= -\frac{8}{20}(2x + 3) + \frac{15}{20}(3x - 7) \\
 &= \frac{-16x - 24}{20} + \frac{45x - 105}{20} \\
 &= \frac{-16x - 24 + 45x - 105}{20} \\
 &= \frac{29x + 129}{20}
 \end{aligned}$$

$$\begin{aligned}
 3. \quad & 7 - 2(5n - 8m) \\
 &= 7 - 10n + 16m
 \end{aligned}$$

$$\begin{aligned}
 4. \quad & 3(2a - 4b) - 4(a - 3b) \\
 &= 6a - 12b - 4a + 12b \\
 &= 2a
 \end{aligned}$$

$$\begin{aligned}
 5. \quad & 6 + 3[2x - 4(3x - 2)] \\
 &= 6 + 3[2x - 12x + 8] \\
 &= 6 + 3[8 - 10x] \\
 &= 6 + 24 - 30x \\
 &= 30 - 30x
 \end{aligned}$$