

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

## Order of Operations and Evaluating Expressions Exit Quiz

Evaluate the expression if  $x = 8$ ,  $y = 3$ , and  $z = 12$ .

1.  $3y^3 - (z - x^2)$

2.  $[7 + 4x + (5yx \div 2)] \div (yz - 3)$

3.  $\frac{xy^2 - 3z}{2}$

4.  $\frac{2xz - y^3}{y}$

5.  $\left(\frac{z}{y}\right)^2 - \frac{3z - 11}{(y - x)^2}$

**Order of Operations and Evaluating Expressions** Exit Quiz**ANSWER**Evaluate the expression if  $x = 8$ ,  $y = 3$ , and  $z = 12$ .

$$\begin{aligned}
 1. \quad & 3y^3 - (z - x^2) \\
 &= 3(3)^3 - (12 - 8^2) \\
 &= 3(27) - (12 - 64) \\
 &= 81 - (-52) \\
 &= 81 + 52 \\
 &= \mathbf{133}
 \end{aligned}$$

$$\begin{aligned}
 2. \quad & [7 + 4x + (5yx \div 2)] \div (yz - 3) \\
 &= [7 + 4(8) + (5(3)(8) \div 2)] \div ((3)(12) - 3) \\
 &= [7 + 32 + (5(24) \div 2)] \div (36 - 3) \\
 &= [39 + (120 \div 2)] \div (33) \\
 &= [39 + 60] \div 33 \\
 &= 99 \div 33 \\
 &= \mathbf{3}
 \end{aligned}$$

$$\begin{aligned}
 3. \quad & \frac{xy^2 - 3z}{2} \\
 &= \frac{(8)(3^2) - 3(12)}{2} \\
 &= \frac{8(9) - 36}{2} \\
 &= \frac{72 - 36}{2} \\
 &= \frac{36}{2} \\
 &= \mathbf{18}
 \end{aligned}$$

$$\begin{aligned}
 4. \quad & \frac{2xz - y^3}{y} \\
 &= \frac{2(8)(12) - 3^3}{3} \\
 &= \frac{2(96) - 27}{3} \\
 &= \frac{192 - 27}{3} \\
 &= \frac{165}{3} \\
 &= \mathbf{55}
 \end{aligned}$$

$$\begin{aligned}
 5. \quad & \left(\frac{z}{y}\right)^2 - \frac{3z - 11}{(y - x)^2} \\
 &= \left(\frac{12}{3}\right)^2 - \frac{3(12) - 11}{(3 - 8)^2} \\
 &= (4)^2 - \frac{36 - 11}{(-5)^2} \\
 &= 16 - \frac{25}{25} \\
 &= 16 - 1 \\
 &= \mathbf{15}
 \end{aligned}$$