

Order of Operations Practice

Name: _____

Date: _____

Question 1

Solve

I. $8 \div 4 + 3\{9 + 2(3 - 5)^3\} =$

II. $-15 \div 3(6 - 4)^3 =$

III.
$$\frac{12(9 - 7) + 4 \cdot 5}{2^4 + 3^2} =$$

IV.
$$\frac{-3^3 - 2 \cdot 3^2}{8 \div 2^2 - (6 - |2 - 15|)} =$$

Order of Operations Practice

Question 2

Evaluate

I. $9 - 4x$ $x = 36$

II. $50 \div 2 \cdot x$ $x = 5$

III. $5x \div 15x^2$ $x = 3$

IV. $(-x)^2 - 5x$ $x = -3$

V. $\frac{3x - 4x^2}{x^2 - 20}$ $x = 5$

Order of Operations Practice

Name: _____ **Key** _____

Date: _____

Question 1

Solve

I. $8 \div 4 + 3\{9 + 2(3 - 5)^3\} = -19$

$$8 \div 4 + 3\{9 + 2(-2)^3\} \longrightarrow 8 \div 4 + 3\{9 + 2 \cdot -8\} \longrightarrow 8 \div 4 + 3\{9 + -16\} \longrightarrow 8 \div 4 + 3 \cdot -7$$

$$\downarrow$$

$$\underline{-19} \longleftarrow 2 + \underline{-21} \longleftarrow \underline{2} + 3 \cdot -7$$

II. $-15 \div 3(6 - 4)^3 = -40$

$$\underline{-15} \div 3(2)^3 \longrightarrow \underline{-15} \div 3 \cdot 8 \longrightarrow \underline{-5} \cdot 8 \longrightarrow \underline{-40}$$

III. $\frac{12(9 - 7) + 4 \cdot 5}{2^4 + 3^2} = \frac{44}{25}$

$$\frac{12(9 - 7) + 4 \cdot 5}{16 + 3^2} \longrightarrow \frac{12(9 - 7) + 4 \cdot 5}{16 + 9} \longrightarrow \frac{12(9 - 7) + 4 \cdot 5}{25} \longrightarrow \frac{12 \cdot 2 + 4 \cdot 5}{25}$$

$$\downarrow$$

$$\frac{44}{25} \longleftarrow \frac{24 + 20}{25} \longleftarrow \frac{24 + 4 \cdot 5}{25}$$

IV. $\frac{-3^3 - 2 \cdot 3^2}{8 \div 2^2 - (6 - |2 - 15|)} = -5$

$$\frac{-3^3 - 2 \cdot 3^2}{8 \div 2^2 - (6 - |13|)} \longrightarrow \frac{-3^3 - 2 \cdot 3^2}{8 \div 2^2 - (6 - 13)}$$

$$\downarrow$$

$$\frac{-3^3 - 2 \cdot 3^2}{9} \longleftarrow \frac{-3^3 - 2 \cdot 3^2}{2 - -7} \longleftarrow \frac{-3^3 - 2 \cdot 3^2}{8 \div 4 - -7} \longleftarrow \frac{-3^3 - 2 \cdot 3^2}{8 \div 2^2 - -7}$$

$$\downarrow$$

$$\underline{-27} - 2 \cdot 9 \longrightarrow \underline{-27} - 2 \cdot 9 \longrightarrow \underline{-27} - 18 \longrightarrow \underline{-45} \longrightarrow -5$$

Order of Operations Practice

Question 2

Evaluate

I. $9 - 4x$ $x = 36$

$$9 - 4(36) \longrightarrow 9 - \underline{144} \longrightarrow \underline{-135}$$

II. $50 \div 2 \cdot x$ $x = 5$

$$50 \div 2 \cdot 5 \longrightarrow \underline{25} \cdot 5 \longrightarrow \underline{125}$$

III. $5x \div 15x^2$ $x = 3$

$$5(3) \div 15(3)^2 \longrightarrow 5(3) \div \underline{15(9)} \longrightarrow \underline{15} \div 15(9) \longrightarrow \underline{1}(9) \longrightarrow \underline{9}$$

IV. $(-x)^2 - 5x$ $x = -3$

$$(-(-3))^2 - 5(-3) \longrightarrow \underline{(3)^2} - 5(-3) \longrightarrow \underline{9} - 5(-3) \longrightarrow 9 - \underline{-15} \longrightarrow \underline{24}$$

V. $\frac{3x - 4x^2}{x^2 - 20}$ $x = 5$

$$\begin{array}{ccccccc} \frac{3(5) - 4(5)^2}{(5)^2 - 20} & \longrightarrow & \frac{3(5) - 4(5)^2}{\underline{25} - 20} & \longrightarrow & \frac{3(5) - 4(5)^2}{\underline{5}} & \longrightarrow & \frac{3(5) - 4(\underline{25})}{5} \longrightarrow \frac{\underline{15} - 4(25)}{5} \\ & & & & & & \downarrow \\ & & & & & & \frac{15 - \underline{100}}{5} \\ & & & & \frac{-85}{5} & \longleftarrow & \\ \underline{-17} & \longleftarrow & & & & & \end{array}$$