ORDER OF OPERATIONS

Example 1: $\left(\left(\dfrac{7}{6} - \dfrac{5}{6}\right) + \dfrac{8}{3}\right) \times 2^3$

$= \left(\dfrac{1}{3} + \dfrac{8}{3}\right) \times 2^3$

$= 3 \times 2^3$

$= 3 \times 8$

$= \mathbf{24}$

Example 2: $((6.25 \div 2.5) + 1.2^2) - 3.89$

$= (2.5 + 1.2^2) - 3.89$

$= (2.5 + 1.44) - 3.89$

$= 3.94 - 3.89$

$= \mathbf{0.05}$

Solve each expression.

1) $(-8.5)^2 + (1.8 \times (8.3 - 0.6))$

2) $\left(\dfrac{8}{3} + \left(-\dfrac{3}{4} \times \dfrac{8}{9}\right)\right) \times \left(\dfrac{5}{4}\right)^2$

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3) $\dfrac{3}{4} + 2\dfrac{1}{2} - \left(\left(-\dfrac{4}{5}\right)^2 \div \left(\dfrac{2}{5}\right)^3\right)$

4) $((-2.3)^2 + (-1.9)^2) \times 1.5$

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5) $2.8 \times (4.32 \div (3.3 - 2.7)^3)$

6) $\left(\dfrac{9}{4} - \left(\left(\dfrac{1}{2}\right)^3 + 1\dfrac{1}{8}\right)\right) \times 2^2$

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7) $\left(\left(\left(-\dfrac{5}{2}\right)^3 \div \dfrac{25}{8}\right) + \dfrac{1}{2}\right) - \dfrac{1}{3}$

8) $((4.5 \times 1.6)^2 \div 4.8) + 1.9 - 2.4$

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ORDER OF OPERATIONS

Answer key

OF:50

Example 1: $\left(\left(\dfrac{7}{6} - \dfrac{5}{6}\right) + \dfrac{8}{3}\right) \times 2^3$

$$= \left(\dfrac{1}{3} + \dfrac{8}{3}\right) \times 2^3$$

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Example 2: $((6.25 \div 2.5) + 1.2^2) - 3.89$

$$= (2.5 + 1.2^2) - 3.89$$

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Solve each expression.

1) $(-8.5)^2 + (1.8 \times (8.3 - 0.6))$

86.11
_____

2) $\left(\dfrac{8}{3} + \left(-\dfrac{3}{4} \times \dfrac{8}{9}\right)\right) \times \left(\dfrac{5}{4}\right)^2$

$3\dfrac{1}{8}$
_____

3) $\dfrac{3}{4} + 2\dfrac{1}{2} - \left(\left(-\dfrac{4}{5}\right)^2 \div \left(\dfrac{2}{5}\right)^3\right)$

$-6\dfrac{3}{4}$
_____

4) $((-2.3)^2 + (-1.9)^2) \times 1.5$

13.35
_____

5) $2.8 \times (4.32 \div (3.3 - 2.7)^3)$

56
_____

6) $\left(\dfrac{9}{4} - \left(\left(\dfrac{1}{2}\right)^3 + 1\dfrac{1}{8}\right)\right) \times 2^2$

4
_____

7) $\left(\left(\left(-\dfrac{5}{2}\right)^3 \div \dfrac{25}{8}\right) + \dfrac{1}{2}\right) - \dfrac{1}{3}$

$-4\dfrac{5}{6}$
_____

8) $((4.5 \times 1.6)^2 \div 4.8) + 1.9 - 2.4$

10.3
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