ORDER OF OPERATIONS

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

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

$= 3 \times 2^3$

$= 3 \times 8$

$= \mathbf{\color{red}{24}}$

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

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

$= (2.5 + 1.44) - 3.89$

$= 3.94 - 3.89$

$= \mathbf{\color{red}{0.05}}$

Solve each expression.

1) $\left(\left(-\dfrac{1}{2}\right)^2 \times \left(\dfrac{2}{3}\right)^2\right) + 1\dfrac{5}{9}$

_____

2) $((6.2 + 9.1^2) \times (0.5 - 0.5^2)) \div 2.5$

_____

3) $\left(\dfrac{3}{4} + \left(\dfrac{6}{5} \times \left(\dfrac{5}{2}\right)^2\right)\right) - \dfrac{1}{4}$

_____

4) $19.25 - ((7.8 + 3.2) \times 2.2^2)$

_____

5) $2.4^2 \times ((-5.3) - (-5.9)) \div (-0.6)$

_____

6) $\left(\dfrac{3}{4}\right)^2 - \left(\dfrac{12}{25} \div \left(\dfrac{4}{5} \times \dfrac{4}{5}\right)\right)$

_____

7) $12.9 - ((-1.8)^2 \div (-0.9))$

_____

8) $\dfrac{4}{9} \div \left(\left(\dfrac{1}{7} \times \dfrac{7}{9}\right) + \dfrac{11}{3^2}\right)$

_____

ORDER OF OPERATIONS

Answer key

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

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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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$= \mathbf{0.05}$

Solve each expression.

1) $\left(\left(-\dfrac{1}{2}\right)^2 \times \left(\dfrac{2}{3}\right)^2\right) + 1\dfrac{5}{9}$

$\mathbf{1\dfrac{2}{3}}$

2) $((6.2 + 9.1^2) \times (0.5 - 0.5^2)) \div 2.5$

$\mathbf{8.901}$

3) $\left(\dfrac{3}{4} + \left(\dfrac{6}{5} \times \left(\dfrac{5}{2}\right)^2\right)\right) - \dfrac{1}{4}$

$\mathbf{8}$

4) $19.25 - ((7.8 + 3.2) \times 2.2^2)$

$\mathbf{-33.99}$

5) $2.4^2 \times ((-5.3) - (-5.9)) \div (-0.6)$

$\mathbf{-5.76}$

6) $\left(\dfrac{3}{4}\right)^2 - \left(\dfrac{12}{25} \div \left(\dfrac{4}{5} \times \dfrac{4}{5}\right)\right)$

$\mathbf{-\dfrac{3}{16}}$

7) $12.9 - ((-1.8)^2 \div (-0.9))$

$\mathbf{16.5}$

8) $\dfrac{4}{9} \div \left(\left(\dfrac{1}{7} \times \dfrac{7}{9}\right) + \dfrac{11}{3^2}\right)$

$\mathbf{\dfrac{1}{3}}$