

Order of Operations (E)

Name: _____

Date: _____

Simplify each expression using the correct order of operations.

$$8 + 5 - 3 \times 2^3 \div (9 - 6)$$

$$(3^2 + 7 - 9) \times (4^3 \div 8)$$

$$(10^2 \div (6 + 8 - 9)^2) \times 4$$

$$(4 - 2^2) \times 3 \div 7 + 8^2$$

$$(10 \times 6) \div (4^2 - 5 + 3^2)$$

$$(3^2 \times 4) \div 6 + 5^2 - 2$$

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$$\begin{aligned} & 8 + 5 - 3 \times 2^3 \div (9 - 6) \\ &= 8 + 5 - 3 \times \underline{2^3} \div 3 \\ &= 8 + 5 - \underline{3 \times 8} \div 3 \\ &= 8 + 5 - \underline{24 \div 3} \\ &= \underline{8 + 5} - 8 \\ &= \underline{13 - 8} \\ &= 5 \end{aligned}$$

$$\begin{aligned} & (\underline{3^2} + 7 - 9) \times (4^3 \div 8) \\ &= (\underline{9 + 7} - 9) \times (4^3 \div 8) \\ &= (\underline{16 - 9}) \times (4^3 \div 8) \\ &= 7 \times (\underline{4^3} \div 8) \\ &= 7 \times (\underline{64 \div 8}) \\ &= \underline{7 \times 8} \\ &= 56 \end{aligned}$$

$$\begin{aligned} & (10^2 \div (\underline{6 + 8} - 9)^2) \times 4 \\ &= (10^2 \div (\underline{14 - 9})^2) \times 4 \\ &= (\underline{10^2} \div 5^2) \times 4 \\ &= (100 \div \underline{5^2}) \times 4 \\ &= (\underline{100 \div 25}) \times 4 \\ &= \underline{4 \times 4} \\ &= 16 \end{aligned}$$

$$\begin{aligned} & (4 - \underline{2^2}) \times 3 \div 7 + 8^2 \\ &= (\underline{4 - 4}) \times 3 \div 7 + 8^2 \\ &= 0 \times 3 \div 7 + \underline{8^2} \\ &= \underline{0 \times 3} \div 7 + 64 \\ &= \underline{0 \div 7} + 64 \\ &= \underline{0 + 64} \\ &= 64 \end{aligned}$$

$$\begin{aligned} & (\underline{10 \times 6}) \div (4^2 - 5 + 3^2) \\ &= 60 \div (\underline{4^2} - 5 + 3^2) \\ &= 60 \div (16 - 5 + \underline{3^2}) \\ &= 60 \div (\underline{16 - 5} + 9) \\ &= 60 \div (\underline{11 + 9}) \\ &= \underline{60 \div 20} \\ &= 3 \end{aligned}$$

$$\begin{aligned} & (\underline{3^2} \times 4) \div 6 + 5^2 - 2 \\ &= (\underline{9 \times 4}) \div 6 + 5^2 - 2 \\ &= 36 \div 6 + \underline{5^2} - 2 \\ &= \underline{36 \div 6} + 25 - 2 \\ &= \underline{6 + 25} - 2 \\ &= \underline{31 - 2} \\ &= 29 \end{aligned}$$