



Order of Operations (involving the four arithmetic operations and parenthesis)

Grade 6 Expressions & Equations Worksheet

Date: _____

Name: _____

Evaluate each expression using order of operations (**PEMDAS**).

Note: **MD** (Multiplication and Division is from Left to Right); **AS** (Addition and Subtraction is from Left to Right)

1. $(15 - 9 \div 3) + 4 \times 2 = \boxed{}$

Workings:

2. $4 - 3 + (11 \times 5 - 2) = \boxed{}$

Workings:

3. $(12 - 6 \times 2) + 3 \times 5 = \boxed{}$

Workings:

4. $8 \div (1 + 1 \times 3) - 5 \times 2 = \boxed{}$

Workings:

5. $10 + (4 \times 5 \div 2) - 25 = \boxed{}$

Workings:



Order of Operations (involving the four arithmetic operations and parenthesis)

Grade 6 Expressions & Equations Answer Sheet

1. $(15 - 9 \div 3) + 4 \times 2 = \boxed{20}$

Workings:

$$\begin{aligned} (15 - 9 \div 3) + 4 \times 2 & \text{ First, simplify the parenthesis } 9 \div 3 = 3 \\ & = (15 - 3) + 4 \times 2 \text{ Again, simplify the parenthesis } 15 - 3 = 12 \\ & = 12 + 4 \times 2 \text{ Next, multiply } 4 \times 2 = 8 \\ & = 12 + 8 \text{ Finally, add } 12 + 8 = 20 \\ & = 20 \checkmark \end{aligned}$$

2. $4 - 3 + (11 \times 5 - 2) = \boxed{54}$

Workings:

$$\begin{aligned} 4 - 3 + (11 \times 5 - 2) & \text{ First, simplify the parenthesis } 11 \times 5 = 55 \\ & = 4 - 3 + (55 - 2) \text{ Again, simplify the parenthesis } 55 - 2 = 53 \\ & = 4 - 3 + 53 \text{ Now, subtract } 4 - 3 = 1 \\ & = 1 + 53 \text{ Finally, add } 1 + 53 = 54 \\ & = 54 \checkmark \end{aligned}$$

3. $(12 - 6 \times 2) + 3 \times 5 = \boxed{15}$

Workings:

$$\begin{aligned} (12 - 6 \times 2) + 3 \times 5 & \text{ First, simplify the parenthesis } 6 \times 2 = 12 \\ & = (12 - 12) + 3 \times 5 \text{ Again, simplify the parenthesis } 12 - 12 = 0 \\ & = 0 + 3 \times 5 \text{ Next, multiply } 3 \times 5 = 15 \\ & = 0 + 15 \text{ Finally, add } 0 + 15 = 15 \\ & = 15 \checkmark \end{aligned}$$

4. $8 \div (1 + 1 \times 3) - 5 \times 2 = \boxed{-8}$

Workings:

$$\begin{aligned} 8 \div (1 + 1 \times 3) - 5 \times 2 & \text{ First, simplify the parenthesis } 1 \times 3 = 3 \\ & = 8 \div (1 + 3) - 5 \times 2 \text{ Again, simplify the parenthesis } 1 + 3 = 4 \\ & = 8 \div 4 - 5 \times 2 \text{ Next, divide } 8 \div 4 = 2 \\ & = 2 - 5 \times 2 \text{ Then, multiply } 5 \times 2 = 10 \\ & = 2 - 10 \text{ Finally, subtract } 2 - 10 = -8 \\ & = -8 \checkmark \end{aligned}$$

5. $10 + (4 \times 5 \div 2) - 25 = \boxed{-5}$

Workings:

$$\begin{aligned} 10 + (4 \times 5 \div 2) - 25 & \text{ First, simplify the parenthesis } 4 \times 5 = 20 \\ & = 10 + (20 \div 2) - 25 \text{ Again, simplify the parenthesis } 20 \div 2 = 10 \\ & = 10 + 10 - 25 \text{ Now, add } 10 + 10 = 20 \\ & = 20 - 25 \text{ Finally, subtract } 20 - 25 = -5 \\ & = -5 \checkmark \end{aligned}$$