

# Simplifying Numerical Expressions (Order of Operations)

## Assignment

**Part A:** Given the numerical expressions, examine which solution was done correctly. Justify your answer.

1.

### Solution A

$$-7 - 8 + 24 \div (-4)(-3)$$

$$-7 - 8 + (-6)(-3)$$

$$-7 - 8 + 18$$

$$-15 + 18$$

$$3$$

### Solution B

$$-7 - 8 + 24 \div (-4)(-3)$$

$$-7 - 8 + 24 \div 12$$

$$-7 - 8 + 2$$

$$-15 + 2$$

$$-13$$

Which numerical expression is simplified correctly? Justify your answer.

**Answer:**

2.

### Solution A

$$-2(5 - 7) \div 2 - (-10)$$

$$-2(-2) \div 2 - (-10)$$

$$-2(-1) - (-10)$$

$$2 - (-10)$$

$$12$$

### Solution B

$$-2(5 - 7) \div 2 - (-10)$$

$$-2(-2) \div 2 - (-10)$$

$$4 \div 2 - (-10)$$

$$2 - (-10)$$

$$12$$

Which numerical expression is simplified correctly? Justify your answer.

**Answer:**

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## Assignment

3.

### Solution A

$$3^3 \div 9(-3) + (-3)^2$$

$$27 \div 9(-3) + 9$$

$$3(-3) + 9$$

$$-9 + 9$$

$$0$$

### Solution B

$$3^3 \div 9(-3) + (-3)^2$$

$$27 \div 9(-3) + 9$$

$$27 \div (-27) + 9$$

$$-1 + 9$$

$$8$$

Which numerical expression is simplified correctly? Justify your answer.

**Answer:**

4.

### Solution A

$$-1[(25 - 7) \div 9]^2 - (64 \div 32)^2$$

$$-1[18 \div 9]^2 - (64 \div 32)^2$$

$$-1[2]^2 - (2)^2$$

$$-1[4] - 4$$

$$-1(0)$$

$$0$$

### Solution B

$$-1[(25 - 7) \div 9]^2 - (64 \div 32)^2$$

$$-1[18 \div 9]^2 - (64 \div 32)^2$$

$$-1[2]^2 - (2)^2$$

$$-1[4] - 4$$

$$-4 - 4$$

$$-8$$

Which numerical expression is simplified correctly? Justify your answer.

**Answer:**

# Simplifying Numerical Expressions (Order of Operations)

## Assignment

**Part B:** Simplify the following numerical expressions.

1.  $-100 - 35 \div (-5)$

2.  $-5 + (8 + 2) \div (-10 \div 2) + 9$

3.  $16 \times 5 \div (12 - 7) - (-10)$

4.  $(45 \div 5) \div 3(12 \div 3) - 12$

5.  $24 \div (-2)^3 + 5(-2)$

6.  $5(2 + 10 \div 2) - [(25 \div 5) + 2^4 - 5]$

7.  $[-2(-16 \div 8) + 5]^2 - 1$

8.  $3[6 - (-4)(-2)] + (10 \div 5)^2 - 2^4$

9.  $100 \div 10[20 \div (-4)] - 5^2(4^2 \div 8)$

10.  $\{36 + 7[6 - 2(24 \div 12) + 3^2(2)]\} \div 4$