

MAT 0024: Order of Operations

PE/MD/AS

- 1) Parentheses:** Simplify within grouping symbols (starting within the inner most set).
- 2) Exponents:** Evaluate any exponents.
- 3) Multiply and Divide:** These operations occur during the same step from left to right.
- 4) Addition and Subtraction:** These operations occur during the same step from left to right.

Simplify the following expressions:

1. $2 \cdot 4^2$

7. $9 \cdot 2 - 6 \cdot (-3) + (-10)$

2. $(6 - 12)(3)$

8. $|-3 + 7| \cdot 3^2$

3. $-4 + 3(6)$

9. $(-49 \div 7) - (4^2 \div 2^3)$

4. $5 + 7 \cdot 3 - 10$

10. $\frac{20 - 12}{2^3}$

5. $8^2(4 - 1)^3$

11. $\frac{(-3)(-4) - (4)(6)}{2^2(10 - 7)}$

6. $[4 + (-3)]^2$

12. $\frac{6(-1) - (-2)(-3)}{-5}$

MAT 0024: Order of Operations

Answer Key:

1. 32

2. -18

3. 14

4. 16

5. 1728

6. 1

7. 26

8. 36

9. -9

10. 1

11. -1

12. $12/5$