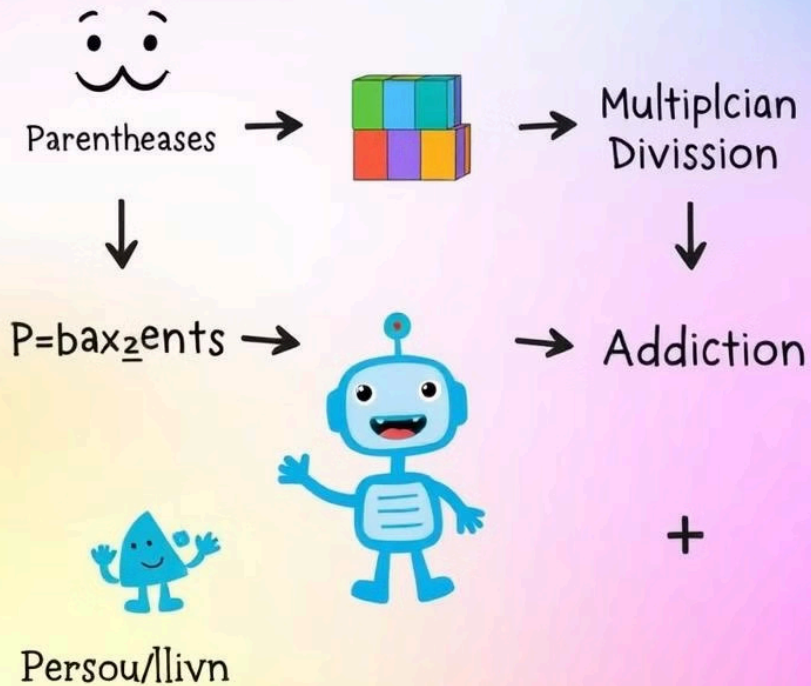


Mathematics: Performing a Series of Operations Using PMDAS or GMDAS

This module focuses on simplifying expressions involving a series of operations on whole numbers using the PMDAS or GMDAS rule.



Order of Operations



Understanding PMDAS/GMDAS

1

Parentheses/Grouping

Simplify expressions within parentheses or other grouping symbols first.

2

Multiplication/Division

Perform multiplication or division from left to right.

3

Addition/Subtraction

Perform addition or subtraction from left to right.

Example: $(10 \div 2 \times 5) \times (14 + 6 - 4) + 2$

1

Step 1

Simplify expressions inside parentheses: $(10 \div 2 \times 5) = 25$ and $(14 + 6 - 4) = 16$.

2

Step 2

Multiply 25 by 16: $25 \times 16 = 400$.

3

Step 3

Add 400 and 2: $400 + 2 = 402$.

$$2 \times + 5$$

$$2 \times + 5 \quad ||$$

A:

1: tink = nome

B:

2: tix + nome

5:

4: tix = purple

15:

3: be at

Example: $20 + (10 - 15 \div 3) \times 3$

Step 1

Simplify the expression inside the parentheses: $15 \div 3 = 5$, then $10 - 5 = 5$.

Step 2

Multiply 5 by 3: $5 \times 3 = 15$.

Step 3

Add 20 and 15: $20 + 15 = 35$.

O $\underline{4-45} = -26$

A $\underline{6-45} = -10$

C $\underline{2-46} = -10$

O $\underline{8-45} = -75$

O $\underline{2-46} = -10$

C $\underline{4.34-10}$

E $\underline{6.3.8-16}$

F $\underline{8.3.5-15}$

E $\underline{8.3.8-16}$

F $\underline{3.3.6-16}$

O $\underline{2.36} = -5$

C $\underline{2-36} = -5$

C $\underline{346} = -15$

O $\underline{5-38} = -5$

O $\underline{2.84} = -15$



$\underline{4-45}$

Independent Activity 1

1) $[(12 - 3) + (18 \div 6) \times 3]$

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

3) $18 - (12 \div 6) + 7$

4) $7 - 5 + 8 \times (16 \div 4)$

5) $(10 \times 6) \div (9 - 3 + 6)$

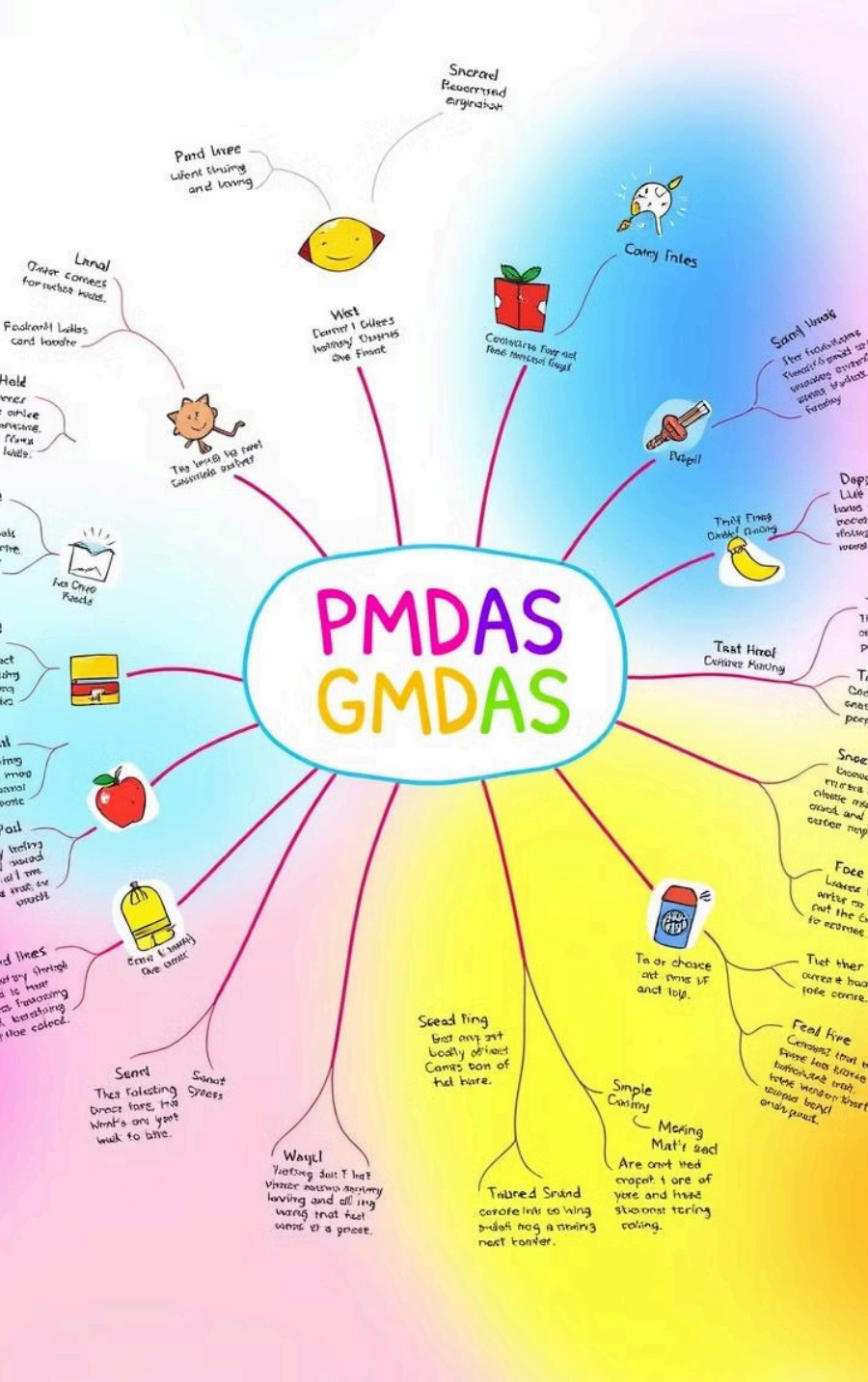
6) $15 - 3 + 20 \div 5 \times 3$

7) $(6 \times 6) - 9 + 8$

8) $22 - 15 \div 7 + 10$

9) $10 + 30 \div 2 \times 3$

10) $12 + 4 \times 6 \div 8$



Summary



Parentheses/Grouping

Simplify expressions within parentheses or other grouping symbols first.



Multiplication/Division

Perform multiplication or division from left to right.



Addition/Subtraction

Perform addition or subtraction from left to right.



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Additional Practice

1) $60 \times 3 \div 4 + 5 = \underline{\hspace{2cm}}$

2) $(14 - 6) + (3 - 1) \times 24$
 $= \underline{\hspace{2cm}}$

3) $(3 \times 30) + (100 \div 5) =$
 $\underline{\hspace{2cm}}$

4) $2 \times [3 + 2 \times (10 - 3)] =$
 $\underline{\hspace{2cm}}$

5) $11 + 3 \times [4 + (9 - 8) -$
 $2] = \underline{\hspace{2cm}}$

6) $18 \div 6 \times 4 - 3 + 6 =$
 $\underline{\hspace{2cm}}$

7) $14 - 8 + 3 + 8 \times 24 \div$
 $8 = \underline{\hspace{2cm}}$

8) $4 \times 5 + (14 + 8) - 36 \div$
 $6 = \underline{\hspace{2cm}}$

9) $(28 \div 4) + 3 + (10 - 8)$
 $\times 5 = \underline{\hspace{2cm}}$

10) $(17 - 7) \times 6 + 2 + 56$
 $- 8 = \underline{\hspace{2cm}}$