

1.1 - Order of Operations

Which is correct?

$$15 + 3 \cdot 2 = 36 \quad \times$$

$$15 + 3 \cdot 2 = 21 \quad \checkmark$$

Rules for order of operations

1) Parentheses () / Brackets []

2) Exponents x^2

3) Multiplication / Division (From L \rightarrow R)

4) Addition / Subtraction (From L \rightarrow R)

$$1) \quad 15 - 14 \cdot 3 \div 6 =$$

$$15 - 42 \div 6 =$$

$$15 - 7 =$$

8

Top:

$$\frac{2 \cdot 7 + 5 \cdot 3 =}{14 + 5 \cdot 3 =}$$

$$14 + 15 =$$

$$29$$

Bottom:

$$30 - 29 =$$

1

$$3) \quad \frac{3^2 \cdot 10 - 6^2}{9 \cdot 10 - 36} \div 12 =$$

$$\frac{90 - 36}{90 - 36} \div 12 =$$

$$\frac{90 - 36}{90 - 36} =$$

$$87$$

$$4) \quad 16 \div 4 \cdot 3^2 - 6(2 \cdot 3) =$$

$$16 \div 4 \cdot 3^2 - 6 \cdot 6 =$$

$$4 \cdot 9 - 6 \cdot 6 =$$

$$36 - 36 =$$

$$0$$

Multiplication!

$$5) \quad 2 \cdot 7 + 5 - 3 + 6 \cdot 5 + 3 =$$

$$14 + 5 - 3 + 6 \cdot 5 + 3 =$$

$$14 + 5 - 3 + 30 + 3 =$$

$$19 - 3 + 30 + 3 =$$

$$16 + 30 + 3 =$$

$$46 + 3 =$$

49

$$6) \quad \frac{20 - [4^2 \div (2 + 14)] + 5}{(4^2 - 13)} = \frac{24}{3} = 8$$

Top:

$$20 - [4^2 \div (2 + 14)] + 5 =$$

$$20 - [4^2 \div 16] + 5 =$$

$$20 - [16 \div 16] + 5 =$$

$$20 - 1 + 5 =$$

$$19 + 5 =$$

24

Bottom:

$$4^2 - 13 =$$

$$16 - 13 =$$

3