

MATHEMATICAL OPERATIONS

$+$, $-$, $\times$, $\div$ are ~~are~~ Mathematical symbols.

$>$, $<$, $\geq$, $\leq$ are mathematical statements

1. If $+$ means $\div$, $-$ means $\times$, $\times$ means $-$, $\div$ means $+$.
which of the following will be value of expression $16 \div 8 - 4 + 2 \times 4$

A. $+$ $\Rightarrow$ $\div$

$-$ $\Rightarrow$ $\times$

$\div$ $\Rightarrow$ $+$

$\times$ $\Rightarrow$ $-$

$$16 \div 8 - 4 + 2 \times 4 \Rightarrow 16 + 8 \times 4 \div 2 - 4$$

Then follow

B = Bracket

O = of

D = Division

M = Multiply

A = Addition

S = Subtraction

$$\Rightarrow 16 + 8 \times 4 \div 2 - 4$$

$$= 16 + 8 \times 2 - 4$$

$$= 16 + 16 - 4$$

$$= 32 - 4$$

$$= 28$$

2. If $+$ means $\div$, $-$ means $\times$, $\div$ means $+$, $\times$ means $-$.

Then $36 \times 12 + 4 \div 6 + 2 - 3 = ?$

A) $36 \times 12 + 4 \div 6 + 2 - 3 \Rightarrow 36 - 12 \div 4 + 6 \div 2 \times 3$

$$= 36 - 3 + 3 \times 3$$

$$= 36 - 3 + 9$$

$$= 45 - 3$$

$$= 42$$

3) If $\times = \div$, $-$ means $\times$, $\div$ means $+$, $+$ means $-$. then

$$(3 - 15 \div 19) \times 8 + 6 = ?$$

A) $(3 - 15 \div 19) \times 8 + 6 \Rightarrow (3 \times 15 + 19) \div 8 - 6$

$$\Rightarrow (45 + 19) \div 8 - 6$$

$$\Rightarrow 64 \div 8 - 6$$

$$\Rightarrow 8 - 6$$

$$= 2$$

4. If $\div$ means $+$, $-$ means $\div$, $\times$ means $-$, $+$ means $\times$.

Then
$$\frac{(36 \times 4) - 8 \times 4}{4 + 8 \times 2 + 16 \div 1} = ?$$

A.
$$\frac{(36 \times 4) - 8 \times 4}{4 + 8 \times 2 + 16 \div 1} \Rightarrow \frac{(36 - 4) \div 8 - 4}{4 \times 8 - 2 \times 16 + 1}$$

$$\Rightarrow \frac{32 \div 8 - 4}{32 - 32 + 1}$$

$$\Rightarrow \frac{4 - 4}{1} = \frac{0}{1} = 0$$

5. If P means $\div$, Q means $\times$, R means $+$, S means $-$
Then $18 Q^{12} P 4 R 5 S 6$

A. $18 Q 12 P 4 R 5 S 6 \Rightarrow 18 \times 3 + 5 - 6$

$= 53$

6. If L means $\times$, M means $\div$, P means $+$, Q means $-$
Then $16 P 24 M 8 Q 6 M 2 L 3 = ?$

A. $16 P 24 M 8 Q 6 M 2 L 3 \Rightarrow 16 + 3 - 3 \times 3$

$= 10$

7. If $\times$ means $-$, $\div$ means $+$, $+$ means $\div$, $-$ means $\times$
Then which equation is correct.

- a) $50 - 5 \div 5 \times 20 + 10 = 6$ b) $8 \div 10 - 3 + 5 \times 6 = 8$
- c) $6 \times 2 + 3 \div 12 - 3 = 50$ d) $3 \div 7 - 5 \times 10 + 3 = 10$

A. a) $50 \times 5 + 5 - 20 \div 10 = 6$

$\times$ $250 + 5 - 2 = 6$

$255 - 2 = 6$

$253 \neq 6$

b) $8 + 10 \times 3 \div 5 - 6 = 8$

$8 + 10 \times \frac{3}{5} - 6 = 8$

$8 + 6 - 6 = 8$

$14 - 6 = 8$

$8 = 8$

8. If P means $+$, Q means $-$, R means $\times$, S means $\div$
which one is correct?

- a) $36 R 4 S 8 Q 7 P 4 = 10$ b) $16 R 12 P 49 S 7 Q 9 = 200$
- c) $32 S 8 R 9 = 16 Q 12 R 12$ d) $8 R 8 P 8 S 8 Q 8 = 57$

A) ⑥ $16 \times 12 + 49 \div 7 - 9 = 200$

$$192 + 7 - 9 = 200$$

$$199 - 9 = 200$$

$$190 \neq 200$$

③ $32 \div 8 \times 9 = 16 - 12 \times 12$

$$4 \times 9 = 16 - 144$$

$$/ \quad 32 \neq 16 - 144$$

✓ ④ $8 \times 8 + 8 \div 8 - 8 = 57$

$$64 + 1 - 8 = 57$$

$$65 - 8 = 57$$

$$/ \quad 57 = 57$$

9. If $>$ means $+$, $<$ means $-$, $+$ means $\div$, $\wedge$ means $\times$,
 $-$ means $=$, $\times$ means $>$, $=$ means $<$. Then choose correct
 statement in each of the following.

a) $6 + 3 > 8 = 4 + 2 < 1$

b) $4 > 6 + 2 \times 32 + 4 < 1$

c) $8 < 4 + 2 = 6 > 3$

d) $4 + 7 > 3 = 6 + 3 > 2$

A) ③ $6 \div 3 + 8 < 4 \div 2 - 1$

$$2 + 8 < 2 - 1$$

$$10 < 1 \quad \times$$

⑥ $4 + 6 \div 2 > 32 \div 4 - 1$

$$4 + 3 > 8 - 1$$

$$7 > 7 \quad \times$$

✓ ③ $8 - 4 \div 2 < 6 + 3$

$$8 - 2 < 9$$

$$6 < 9$$