

Simplification of Brackets -

Kinds of brackets -

1) Bar or Vinculum

2) Small brackets or Parenthesis ()

3) Curly (middle) brackets { }

4) Square brackets or big brackets []

Order of simplifying these brackets is:

1) Bar

2) Parenthesis ()

3) Curly brackets { }

4) Square brackets []

Exercise - 9(A)

1) $19 - (1 + 5) - 3$

$= 19 - 6 - 3$

$= 19 - 9$

$= 10.$

3) $28 - (3 \times 8) \div 6$

$= 28 - 24 \div 6$

$= 28 - 4$

$= 24$

2) $30 \times 6 \div (5 - 2)$

$= 30 \times 6 \div 3$

$= 30 \times 2$

$= 60.$

4) $9 - [(8 - 3) + 2 \times 5]$

$= 9 - [1 + 2 \times 5]$

$= 9 - [1 + 10]$

$= 9 - 11$

$= -2.$

$$\begin{aligned}
 5. & [18 - (15 \div 5) + 6] \\
 & = [18 - 3 + 6] \\
 & = [18 + 6 - 3] \\
 & = [24 - 3] \\
 & = 21.
 \end{aligned}$$

$$\begin{aligned}
 6. & [(4 \times 2) - (4 \div 2)] + 8 \\
 & = [8 - 2] + 8 \\
 & = 6 + 8 \\
 & = 14.
 \end{aligned}$$

$$\begin{aligned}
 7. & 48 + 96 \div 24 - 6 \times 18 \\
 & = 48 + 4 - 6 \times 18 \\
 & = 48 + 4 - 108 \\
 & = 52 - 108 \\
 & = -56.
 \end{aligned}$$

$$\begin{aligned}
 8. & 22 - [3 - \{8 - (4 + 6)\}] \\
 & = 22 - [3 - \{8 - 10\}] \\
 & = 22 - [3 - (-2)] \\
 & = 22 - [3 + 2] \\
 & = 22 - 5 \\
 & = 17
 \end{aligned}$$

$$\begin{aligned}
 9. & 34 - [29 - \{30 + 66 \div (24 - 28 - 26)\}] \\
 & = 34 - [29 - \{30 + 66 \div (24 - 2)\}] \\
 & = 34 - [29 - \{30 + 66 \div 22\}] \\
 & = 34 - [29 - \{30 + 3\}] \\
 & = 34 - [29 - 33] \\
 & = 34 - [-4] \\
 & = 34 + 4 \\
 & = 38.
 \end{aligned}$$

$$\begin{aligned}
 10. & 60 - \{16 \div (4 \times 6 - 8)\} \\
 & = 60 - \{16 \div (24 - 8)\} \\
 & = 60 - \{16 \div 16\} \\
 & = 60 - 1 \\
 & = 59.
 \end{aligned}$$

$$\begin{aligned}
 11. & 25 - [12 - \{5 + 18 \div (4 - 5 - 3)\}] \\
 & = 25 - [12 - \{5 + 18 \div (4 - 2)\}] \\
 & = 25 - [12 - \{5 + 18 \div 2\}] \\
 & = 25 - [12 - \{5 + 9\}] \\
 & = 25 - [12 - 14] \\
 & = 25 - [-2] \\
 & = 25 + 2 = 27
 \end{aligned}$$

$$\begin{aligned}
 12. & 15 - [18 - \{12 + 21 \div (9 - 2)\}] \\
 & = 15 - [18 - \{12 + 21 \div 7\}] \\
 & = 15 - [18 - \{12 + 3\}] \\
 & = 15 - [18 - 15] \\
 & = 15 - 3 \\
 & = 12
 \end{aligned}$$