

CW

29/6/21

## Ch-9 - Playing With Numbers

### Simplification

#### Kinds of brackets

- i) Bar or Vinculum  $\overline{\quad}$
- ii) Small brackets or Parenthesis  $(\quad)$
- iii) Curly brackets or Middle brackets  $\{\quad\}$
- iv) Square brackets  $[\quad]$

The order of simplifying these brackets is

- 1) Bar-
- 2) Small brackets  $(\quad)$
- 3) Curly brackets  $\{\quad\}$
- 4) Square brackets  $[\quad]$

Ex-9'A'

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

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

$$\begin{aligned} \text{ans} &= 19 - (1 + 5) - 3 \\ &= 19 - 6 - 3 \\ &= 19 - 9 \\ &= 10 \end{aligned}$$

$$\begin{aligned} \text{ans} &= 28 - (3 \times 8) \div 6 \\ &= 28 - 24 \div 6 \\ &= 28 - 4 \\ &= 24 \end{aligned}$$

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

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

$$\begin{aligned} \text{ans} &= 30 \times 6 \div (5 - 2) \\ &= 30 \times 6 \div 3 \\ &= 30 \times 2 \\ &= 60 \end{aligned}$$

$$\begin{aligned} \text{ans} &= 9 - [(4 - 3) + 2 \times 5] \\ &= 9 - [1 + 2 \times 5] \\ &= 9 - [1 + 10] \\ &= 9 - 11 \\ &= -2 \end{aligned}$$



$$5) [18 - (15 \div 5) + 6]$$

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

$$9) 34 - [29 - \{30 + 66 \div (24 - 28 - 26)\}]$$

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

$$6) [(4 \times 2) - (4 \div 2)] + 8$$

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

$$10) 60 - \{16 \div (4 \times 6 - 8)\}$$

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

$$7) 48 + 96 \div 24 - 6 \times 18$$

$$\begin{aligned} \text{ans) } &= 48 + 96 \div 24 - 6 \times 18 \\ &= 48 + 4 - 6 \times 18 \\ &= 48 + 4 - 108 \\ &= ~~48 - 108~~ + 4 \quad 52 - 108 \\ &= -56 \end{aligned}$$

$$11) 25 - [12 - \{5 + 18 \div (4 - 5 - 3)\}]$$

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

$$8) 22 - [3 - \{8 - (4 + 6)\}]$$

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

$$12) 15 - [6 - \sqrt{12 + 21 \div (9 - 2)}]$$

$$\begin{aligned} \text{ans) } & 15 - [6 - \sqrt{12 + 21 \div (9 - 2)}] \\ & = 15 - [6 - \sqrt{12 + 21 \div 7}] \\ & = 15 - [6 - \sqrt{12 + 3}] \\ & = 15 - [6 - 15] \\ & = 15 - 1 \\ & = 14 \end{aligned}$$