

# coding and decoding

1.  $23, 28, 38, 53, 73, ? \Rightarrow 98$

$$\begin{array}{cccccc} & \downarrow & & \downarrow & & \downarrow \\ 23 & +5 & 28 & +10 & 38 & +15 \\ & & & & & \downarrow \\ & & & & 53 & +20 \\ & & & & & \downarrow \\ & & & & & 73 & +25 \\ & & & & & & \\ & & & & & & 98 \end{array}$$

2.  $17, 45, 148, 607, ?, 18331$

$$\Rightarrow 17 \times 2 + 11 = 45$$

$$45 \times 3 + 13 = 148$$

$$148 \times 4 + 15 = 607$$

$$607 \times 5 + 17 = 3052$$

$$3052 \times 6 + 19 = 18331$$

3.  $5, 366, 655, ?, 1049, 1170$

$$1, 4 \quad (5, ?)$$

$$2, 5 \quad (366, 1049)$$

$$3, 6 \quad (655, 1170)$$

$$366 \rightarrow 1049 = 683$$

$$655 \rightarrow 1170 = 515$$

$$\text{So, } 5 + 875 = 880$$

4.  $1598, 798, 398, 198, ?, 48$

$$\Rightarrow 1598 - 798 = 800$$

$$798 - 398 = 400$$

$$398 - 198 = 200$$

$$198 - ? = 100$$

$$? = 48 = 50$$

$$\Rightarrow 198 - 100 = 98$$

$$98 - 48 = 50$$

5.  $2, 3, 14, ?, 2068, 51705$

$$\Rightarrow 2 \times 1 + 1 = 3$$

$$3 \times 4 + 2 = 12$$

$$14 \times 9 + 3 = 129$$

$$129 \times 16 + 4 = 2068$$

$$2068 \times 25 + 5 = 51705$$

$$\text{So, Ans is } 129.$$