

19, 20

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$$y = -x^2 + bx + c$$

$$\left(-\frac{b}{2a}, v \right) \Rightarrow -\frac{b}{-2} = \frac{b+12}{2} = v$$

$$b^2 + 12 = 2a - b = 12$$

$$\Rightarrow b = \pm 4$$

$$f(n) = n^2 + 12n + c = 1$$

$$n^2 + 12n, n^2 + 12n = -c$$

$$\Rightarrow 1 - n^2 = 0 \Rightarrow n = \pm 1$$

$$f(n) = (1 - n^2)^2 - 2(1 - n^2) - 10$$

$$1 - n^2 = 0 \Rightarrow 1 - n^2 + 1 - 10 = 0 \Rightarrow (1 - n^2)(1 + n^2) = 0$$

$$1 - n^2 = 0 \Rightarrow n^2 = 1 \Rightarrow n = \pm 1$$

$$1 - n^2 = -10 \Rightarrow n^2 = 11 \Rightarrow n = \pm \sqrt{11}$$

$$\{ n^2 - 15n + m = 0 \}$$

$$\alpha = \beta + 7$$

$$m, \alpha, \beta = ?$$

$$\alpha + \beta = \frac{15}{2} + 7$$

$$2\beta + 7 = \frac{15}{2} + 7 \Rightarrow 2\beta = \frac{15}{2} \Rightarrow \beta = \frac{15}{4}$$

$$\alpha = \beta + 7 = \frac{15}{4} + 7 = \frac{43}{4}$$

$$m = \alpha\beta = \frac{43}{4} \cdot \frac{15}{4} = \frac{645}{16}$$

$$\{ n^2 - 15n + 12 = 0 \}$$

Q. 1.1

$$\alpha + \beta = 5 \Rightarrow \beta = 5 - \alpha$$

Q. 1.2

$$\alpha + \beta = 5 \Rightarrow \alpha = 5 - \beta \Rightarrow \alpha = 5 - \beta$$

$$m^2 = 5m \Rightarrow m = 0 \text{ or } m = 5$$

$$m = 0 \Rightarrow \frac{m-1}{2} = \frac{-1}{2} \Rightarrow m = 1$$

$$\alpha + \beta = 1 \Rightarrow \frac{m^2 - 1}{2} = 1 \Rightarrow m^2 - 1 = 2 \Rightarrow m^2 = 3 \Rightarrow m = \sqrt{3}$$

$$m = \sqrt{3} \Rightarrow m^2 - 1 = 3 - 1 = 2 \Rightarrow \frac{(m+1)(m-1)}{2} = 1 \Rightarrow (m+1)(m-1) = 2$$

$$m^2 - 1 = 2 \Rightarrow m^2 = 3 \Rightarrow m = \sqrt{3}$$

$$\Delta = 15 - \sum \alpha \beta = 15 - 15 = 0$$

$$1 \Rightarrow m^2 + \sum m - 1 = 0 \Rightarrow \Delta = 15 - 15 = 0$$

$$\Rightarrow m = 1$$

$$m^2 - m + 1 = 0$$

$$\alpha + \beta = 1 \Rightarrow \alpha = 1 - \beta \Rightarrow \alpha = 1 - \beta$$

$$\alpha + \beta = \frac{1}{2} + \frac{1}{2} = 1 \Rightarrow \frac{15 + 15}{15} = 2 \Rightarrow \frac{30}{15} = 2$$

Parsian

$$m = \frac{15 + 15}{15} + m = 2 + m$$

کتابچه

11

$$\alpha = \beta \Rightarrow \alpha + \beta = \epsilon \Rightarrow \epsilon \beta = \epsilon \Rightarrow \beta = 1$$

$$\alpha + \beta = \epsilon \Rightarrow \frac{\alpha}{1} + 1 = \epsilon \Rightarrow \alpha = \epsilon - 1$$

$$\alpha = \epsilon - 1 \Rightarrow \alpha + \beta = \epsilon \Rightarrow \epsilon - 1 + 1 = \epsilon$$

$$\alpha + \beta = \epsilon \Rightarrow \alpha = \epsilon - \beta \Rightarrow \alpha = \epsilon - 1$$

$$\epsilon - \sum \epsilon = \epsilon - \sum \epsilon = \epsilon - 1$$

$$h = -1 \cdot f + d + t \Rightarrow h_{max} = -\frac{d}{\epsilon} + \frac{d}{\epsilon} = 0$$

$$\Rightarrow h_{max} = -\frac{1 \cdot d}{\epsilon} + \frac{d}{\epsilon} = 0$$

$$h = 0 \Rightarrow (1 + (d - t)) = 0 \Rightarrow t = d$$

$$t = d \Rightarrow t = d$$

