

TINGKATAN 2

BAB 1

Praktis Sumatif

Bahagian A

1 Jawapan: C

2 2, 4, 8, 16, ...
 $\times 2 \quad \times 2 \quad \times 2$

Jawapan: B

3 $T_1 = 100$
 $T_2 = 100 - 8(1) = 92$
 $T_3 = 100 - 8(2) = 84$
 $\therefore T_n = 100 - 8(n-1)$
 $T_6 = 100 - 8(5) = 60$
 Jawapan: B

4 $T_3 - T_1 = T_5 - T_3 = T_7 - T_5 = 12$

$$\begin{aligned} x = T_4 &= 23 + \frac{12}{2} \\ &= 23 + 6 \\ &= 29 \end{aligned}$$

Jawapan: C

5 Bahagi sebutan sebelumnya dengan 3.

$$\frac{27}{3} = 9$$

Jawapan: A

6 Darab $\frac{3}{2}$ kepada sebutan sebelumnya.

$$\frac{3}{2} \times \frac{81}{2} = \frac{243}{2} \text{ (bukannya 81)}$$

Jawapan: D

7 $T_{16} = \frac{1}{2} \times 16 + 5$
 $= 8 + 5$
 $= 13$

Jawapan: A

8 $38 = \frac{1}{3}n^2 - 10$
 $n^2 = 3(38 + 10)$
 $= 144$
 $n = 12$

Jawapan: C

9 $20 = 5\sqrt{n+3}$
 $n+3 = 4^2$
 $n = 16 - 3$
 $= 13$

Jawapan: A

10 Jawapan: B

Bahagian B

1 (a) 4, 6, 8, 10
 $+2 \quad +2 \quad +2$
 (i) $T_5 = 10 + 2 = 12$
 $T_6 = 12 + 2 = 14$
 $\therefore T_6 = 14$

(ii) $T_2 = 6 + 2 = 8$
 $T_3 = 8 + 2 = 10$
 $T_4 = 10 + 2 = 12$
 $\therefore T_n = 2(n+1)$

(b) $T_n = n\left(\frac{n}{2} + 3\right)$

(i) $T_4 = 4\left(\frac{4}{2} + 3\right)$
 $T_4 = 4(5)$
 $T_4 = 20$

(ii) $T_8 = 8\left(\frac{8}{2} + 3\right)$
 $T_8 = 8(7)$
 $T_8 = 56$

2 1, 4, 7, 10, ..., p, ..., q
 $+3 \quad +3 \quad +3 \quad +3 \quad +3 \quad +3 \quad +3$

(a) $p = 10 + 6$
 $= 16$

(b) $q = 16 + 9$
 $= 25$

(c) $n = 1 \rightarrow 1 = 1 + 3(0)$
 $n = 2 \rightarrow 4 = 1 + 3(1)$
 $n = 3 \rightarrow 7 = 1 + 3(2)$
 $n = 4 \rightarrow 10 = 1 + 3(3)$
 $\therefore T_n = 1 + 3(n-1) = 3n - 2$

(d) $T_{37} = 1 + 3(36)$
 $= 1 + 108$
 $= 109$

Bahagian C

1 (a) (i) $\frac{4}{3} \times \frac{3}{2} = 2$
 $2 \times \frac{3}{2} = 3$

Pola: Darab sebutan sebelumnya dengan $\frac{3}{2}$.

(ii) $p = \frac{16}{27} \times \frac{3}{2} = \frac{8}{9}$

(iii) $\frac{16}{27}, \frac{8}{9}, \frac{4}{3}, 2, 3, \frac{9}{2}, \frac{27}{4}, \frac{81}{8}, \frac{243}{16}, \dots$
 Sebutan ke-9 ialah $\frac{243}{16}$.

(b) (i) $T_4 = 3(4^2 - 4) = 3(12) = 36$

(ii) $T_n = 3(n^2 - 4) = 231$
 $n^2 - 4 = 77$
 $n^2 = 81$
 $n = 9$

Kedudukan sebutan 231 ialah tempat ke-9.

(c) (i) Wang simpanan = RM300 + 14(RM200)
 $= \text{RM}3100$

(ii) $T_1 = 300 + 200(0)$
 $T_2 = 300 + 200(1)$
 $T_3 = 300 + 200(2)$
 $\vdots$
 $T_n = 300 + 200(n-1)$
 $= 300 + 200n - 200$
 $= 200n + 100$

Wang simpanan Ahmad setelah dia menerima gaji bulanan yang ke- n = RM(200 n + 100)