

سؤال ٢

الف) $t_1 = 2$ $t_2 = 11$ $t_3 = 15$ $t_4 = 17$ $t_5 = 18$

ب) $t_1 = \frac{3}{5}$ $t_2 = \frac{5}{6}$ $t_3 = 1$ $t_4 = \frac{9}{1}$ $t_5 = \frac{11}{9}$

سؤال ٢) الف) $t_{13} = \frac{(-1)^{13}}{\sqrt{\frac{15+1}{16}}} - t_{13} = -\frac{1}{2}$

ب) $t_{13} = 24 - \left[\frac{15}{2} \right] = 23$

سؤال ٣) $t_n = 1$

$t_n = 1 \Rightarrow n = 1, n = 5$

$$\begin{array}{c} 5 \\ - | + \end{array}$$

سؤال ٣) $t_n = 1 \Rightarrow n = 1, n = 5$

ب) $t_n = n^2 - 12n + 18$
 $(n-1)(n-18)$
 $n=1, n=18$

$$\begin{array}{c} 18 \\ + | - | + \end{array}$$

$18 - 1 + 1 = 18$

سؤال ٤) $t_n = 2n - 1$

$n=1, n=18$

$$\begin{array}{c} 1 \\ - | + \end{array}$$

$1 - 1 + 1 = 1$

ب) $t_n = n^2 - 12n + 18$
 $(n-3)(n-18)$
 $n=3, n=18$

$$\begin{array}{c} 18 \\ + | - | + \end{array}$$

$18 - 3 + 1 = 16$

سؤال ٥) $t_4 = 18$
 $t_9 = 27$

$t_4 = \frac{(3)(18)}{12} + \frac{(18)}{12} = 18$

$t_n = 2n - 18 \Rightarrow t_9 = 9 - 18 = -9$

سوال ٩)

الف) $t_n = n^2 - 9n + 1$

$t_5 = 9 - 18 + 1 = -8$

جدول $= \frac{-b}{2a} = \frac{+9}{2} = 4.5$

ب) $n^2 + 8n + 1$

$a \rightarrow \min$ جدول $= \frac{-8}{2} = -4$

جدول: $9 - 18 + 1 = -8$

سوال ١٠) $t_n = -F, -V, -A, -V, -F$

$-F, -1, +1, +F$
 $+F, +F, +F$

$a+b+c = -8$

$-a+c = -8$

$c = 1$

$t_{10} = 100 - 90 + 1 = 11$

$\begin{cases} t_1 = n = 1 \rightarrow a+b+c = -8 \\ t_5 = n = 5 \rightarrow 5a+5b+5c = -8 \end{cases}$

$5a+b = -8$

$5b = -8$

$b = -1.6$

سوال ١١) $t_n = -9, -1, 1, 2, 1$

$+8, +2, +1$
 $+8, +8$

$5a = 8$
 $a = 1.6$

$\begin{cases} t_1 = n = 1 \rightarrow a+b+c = -9 \\ t_5 = n = 5 \rightarrow 5a+b+c = -1 \end{cases}$

$t_n = \dots$

$2 - 1 + c = -9$
 $c = -10$

$5a+b = 0$

$9+b = 0$

$b = -9$

سوال ١٢)

$a+8 \leq 2a+1$

$a \geq 7$

$a = [7, +\infty)$

سوال ١٣)

الف) $\left[\frac{1.1}{0.1}\right] = 11$

ب) $\left[\frac{1.1}{0.1}\right] = 11$

ج) $\left[\frac{1.1}{0.1}\right] = 11$

د) $n(A \cup B) = n(A) + n(B) - n(A \cap B) \Rightarrow 10 + 10 - 4 = 16$