

سوال ٢

١٩/٥

عليا عرب

الف) $t_1 = 2$ $t_2 = 11$ $t_3 = 15$ $t_4 = 47$ $t_5 = 75$

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

سوال ٢) الف) $t_{13} = \frac{(-1)^{13}}{\sqrt{\frac{15+1}{16}}} - t_{13} = -\frac{1}{8}$

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

سوال ٣) $t_n = n - 1$

$t_n - 1 = 0$ $t_n = 1$ $n = 2$

$$\begin{array}{c} 2 \\ -1 \quad + \end{array}$$

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سوال ٣) $t_n = n - 1 + 1 = n$

ب) $t_n = n^2 - 12n + 25$
 $(n-6)(n-4)$
 $n=6$ $n=4$

$$\begin{array}{c} 12 \quad 25 \\ +1 \quad -1 \quad + \end{array}$$

$12 < 25$ $25 - 12 + 1 = 14$

سوال ٤) $t_n = 2n - 1$

$2n = 16$
 $n = 8$

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

$1 - 1 + 1 = 1$

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ب) $t_n = n^2 - 12n + 27$
 $(n-6)(n-3)$
 $n=6$ $n=3$

$$\begin{array}{c} 12 \quad 27 \\ +1 \quad -1 \quad + \end{array}$$

$27 - 12 + 1 = 16$

سوال ٥) $t_4 = 7$
 $t_9 = 24$

$\frac{16}{5} = 3.2$

$t_4 = \frac{(3)(7)}{12} + \frac{(6)(7)}{12} = 7$

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$t_n = 2n - 5 \Rightarrow t_9 = 2 \cdot 9 - 5 = 13$

سوال ۶)

الف) $t_n = n^2 - 9n + 2$

$t_2 = 9 - 18 + 2 = -7$

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

ب) $n^2 + 8n + 1$

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

نہیں صاف ہے

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نہیں صاف ہے: $9 - 18 + 1 = -8$

سوال ۷) $t_n = -F, -V, -1, -V, -F$

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

$a+b+c = -8$

$-a+c = -8$

$c = 1$

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

$2a = 2$
 $a = 1$

$t_1 = n = 1 \rightarrow a+b+c = -8$
 $t_2 = n = 2 \rightarrow 4a+2b+c = -7$

$2a+b = -3$

$4a+b = -7$

$b = -6$

9

سوال ۸) $t_n = -9, -1, 1, 2, 1$

$+8, +2, +1$
 $+4, +4$

$2a = 8$
 $a = 4$

$t_1 = n = 1 \rightarrow a+b+c = -9$
 $t_2 = n = 2 \rightarrow 4a+b+c = -1$

$t_n = \dots$

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

$4a+b = d$

$4+b = d$

$b = -1$

5

سوال ۹)

$a+8 \leq 2a+1$

$a \geq 7$

$a = [7, +\infty)$

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سوال ۱۰)

الف) $\left[\frac{1.1}{0.01}\right] = 110$

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ب) $\left[\frac{1.1}{0.01}\right] = 110$

ج) $\left[\frac{1.1}{0.01}\right] = 110$

د) $n(A \cup B) = n(A) + n(B) - n(A \cap B) \Rightarrow 40 + 30 - 5 = 65$