

$$a_1 + a_2 + a_3 = 10$$

$$a_2 + a_3 = 20$$

از دیاریه ۱۰ (سوال ۱)

$$3a_2 = 10 \quad a_2 = \frac{10}{3}$$

$$a_1 + a_2 + a_3 + a_4 + a_5 = 50 \rightarrow 5a_3 = 50$$

$$a_3 = 10$$

$$a_1 + a_2 + a_3 = 10 \rightarrow a_1 = 2$$

$$2, 10, 18, \dots \quad t_n = 3n - 1 \quad t_{10} = 3 \times 10 - 1 = 29$$

$$a_n + b$$

$$2a + 9b$$

$$9a + b = 9(2a + 9b)$$

$$-9a = 2b - 0 = 9a + 1b \quad 0 = 10a + 1b$$

$$-\frac{9}{1}a = b$$

$$a_1, 2a + b \rightarrow 2a + -\frac{9}{1}a = \frac{11}{1}a$$

$$\frac{11a}{1} = \frac{11}{1}$$

$$va + b \rightarrow va - \frac{9}{1}a = \frac{10}{1}a$$

(سوال ۱۰)

$$a_1 = 11$$

$$a_2 = 20$$

$$a_1 + a_2 = 31$$

$$2a_2 = 31 \quad a_2 = 15.5$$

$$n_1 = 31$$

$$n_2 = 20$$

$$2d = 10 \quad d = 5$$

$$(n = \frac{b-a}{d} + 1) = \frac{31-20}{5} + 1 = 3$$

$$\frac{10-20}{n+1} = -5$$

$$n+1 = 2$$

$$n = 1$$

Subject:

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حورا نبی زاده

$$2n-5, 2n-1, 4n, \dots$$

(سوال 5)

$$(2n-1) - (2n-5) = 4n - (2n-1)$$

(5)

$$2n-1 - 2n+5 = 4n - 2n+1$$

$$4 = 2n+1 \rightarrow 2n=3 \quad n=\frac{3}{2}$$

$$t_1 = 2 \times \frac{1}{2} - 5 = -3 \rightarrow$$

$$\begin{array}{ccccccc} & +2 & +2 & +2 & & & \\ -3 & 0 & 3 & 4 & & & \\ & t_2 & & & & & \end{array} \quad d=2$$

$$t_2 = 2 \times \frac{1}{2} - 1 = 0 \rightarrow$$

$$t_3 = 4 \times \frac{1}{2} = 2 \rightarrow$$

$$a_n = 2, 5, 8, \dots, 2n+1$$

(سوال 4)

10

$$2, 5, 8, \dots, 2n+1 \quad \begin{array}{l} +2 \quad +2 \quad +2 \\ \boxed{t_{20}=41} \end{array} \quad 2, 5, 8, \dots, 4 = d$$

$$b_n = 2, 5, 8, \dots, 2n-1 \quad 4n-1 < 41$$

$$+2 \quad +2 \quad \boxed{t_{20}=39}$$

$$4n < 41 \quad \boxed{n \leq 10} \rightarrow n=10$$

$$a_1 + a_2 + a_3 = 21 \rightarrow a_2 - d + a_2 + a_2 + d = 21$$

(سوال 17)

15

$$3a_2 = 21 \rightarrow a_2 = 7$$

(5)

$$a_1 + a_3 + a_5 = 105 \rightarrow a_3 - d + a_3 + a_3 + 2d = 105$$

$$3a_3 = 105 \rightarrow a_3 = 35$$

$$a_1 + a_2 + a_3 = 21$$

$$n + 7 + 35 = 21 \rightarrow 21 - 42 = \boxed{-21 = a_1}$$

20

$$a_3 - a_2 + a_1 = 35 - 7 - 21 = \boxed{7} \rightarrow \text{جواب}$$

تعميم تعديلي

سؤال ١٢

حورا ليدايي زاده

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$$t_n = \infty \quad 9 \quad 13 \quad 17 \quad \dots$$

$$+4 \quad +4 \quad +4$$

$$F \times 1 + 2 = \infty$$

$$t_n = Fn + 1$$

$$t_{10} = 10 \times 4 + 1$$

$$t_{10} = 41$$

سؤال (١) ✓

$$\infty - 4 = 1 = 2$$

سؤال (٢) ✓

الف

$$t_n = 4 \quad 9 \quad 10 \quad 14 \quad 18 \quad \dots$$

$$+4 \quad +4 \quad +4$$

$$t_n = Fn + 2 \quad t_{10} = 42$$

$$t_1 \quad t_2 \quad \dots \quad t_9 \quad t_{10}$$

$$4 \quad 9 \quad 10 \quad \dots \quad 38 \quad 42$$

$$F \quad F \quad \dots \quad F$$

$$\frac{10}{4} = 2.5$$

$$4 \times 41 = 164$$

$$t_n = Fn + 2$$

ب) ٢٩، ٣٠، ٣١، ٣٢ ← ٢٩، ٣٠، ٣١، ٣٢

$$t_{29} = 4 \times 29 + 2 = 118$$

$$t_{32} = 32 \times 4 + 2 = 130$$

$$t_{30} = 30 \times 4 + 2 = 122$$

$$t_{29} + t_{30} + t_{31} + t_{32} = 494$$

$$t_{31} = 31 \times 4 + 2 = 126$$

$$1 + \sqrt{3} \quad 2 \quad 3 - \sqrt{3} \quad \dots$$

$$+ (1 - \sqrt{3}) \quad + (1 - \sqrt{3})$$

سؤال (٣) ✓

$$t_n = (1 - \sqrt{3}) \times n + 2\sqrt{3}$$

$$t_{23} = 23(1 - \sqrt{3}) + 2\sqrt{3} = 23 - 21\sqrt{3}$$

$$t_{25} = 25(1 - \sqrt{3}) + 2\sqrt{3} = 25 - 23\sqrt{3}$$

$$25 - 23\sqrt{3} - (23 - 21\sqrt{3}) = 25 - 23 - 23\sqrt{3} + 21\sqrt{3} = 2 - 2\sqrt{3}$$

20

$$a_n = \omega^{2n} \quad 9 \times \omega^{2n} \quad \omega^y$$

$$x \times y \rightarrow (x + y = 4)$$

سؤال (٤) ✓

$$(1 + \omega^{y-2n}) = 9 \times \omega^{2n}$$

$$\omega^{2n} + \omega^y = 9 \times \omega^{2n}$$

$$1 + \omega^{y-2n} = 9$$

$$\omega^{y-2n} = 8 \rightarrow y - 2n = 1$$

$$x + y = 4$$

$$-x + y = 4$$

$$-3x = -3 \rightarrow x = 1$$

$$x = 1$$

$$y = 3$$

P4YCO