

$$E_n = 5, 9, 13, 17, \dots$$

$$E_n = 2n + 1 \rightarrow E_1 = 3$$

$$E_n = E_{n+1}$$

سوال 1

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$$E_n = 4, 10, 16, 22, \dots$$

$$E_n = E_{n+1}$$

$$E_n = 4n + 6 \rightarrow E_1 = 10$$

$$S_n = \frac{n}{2}(2a + (n-1)d)$$

سوال 2

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$$1 + \sqrt{2}, \sqrt{2}, \sqrt{2} - 1$$

$$E_n = (1 - \sqrt{2})^n + (\sqrt{2})^n$$

$$\sqrt{2} + \sqrt{2} = 2\sqrt{2}$$

$$2\sqrt{2}$$

$$a + b = x \rightarrow b = x - a$$

$$a = 1 - \sqrt{2}$$

$$E_{11} = 22 - 2\sqrt{2}, \sqrt{2} \rightarrow 22 - 2\sqrt{2}$$

$$E_{12} = 24 - 2\sqrt{2}, \sqrt{2} \rightarrow 24 - 2\sqrt{2}$$

$$E_{13} - E_{12} = 2 - 2\sqrt{2}$$

$$E_{14} - E_{13} = -2 + 2\sqrt{2}$$

سوال 3

$$a_n = 2^n, 2 \times 2^n, 2^2 \times 2^n$$

$$b_n = x, 2x, 4x$$

$$x + 2x + 4x = 7x$$

$$x + 2x + 4x = 7x$$

$$x = 1$$

$$2x - 2, 2x - 1, 4x \rightarrow -2, 0, 2, 4 \rightarrow E_4 = 4$$

$$2x - 2 = -2 \rightarrow x = 1$$

$$a^2 \times a^3 = a^{2+3} = a^5$$

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سوال 4

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$$a_n = 2, 5, 8, \dots \rightarrow a_n = 3n - 1 \rightarrow a_1 = 2$$

$$b_n = 2, 5, 8, \dots \rightarrow b_n = 3n - 1 \rightarrow b_1 = 2$$

$$a_1 + a_2 + a_3 = 15 \rightarrow 2 + 5 + 8 = 15$$

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سوال 5

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سوال 6

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$$\frac{a_1 + a_2 + a_3}{3} = \frac{15}{3} = 5$$

$$a_n = 2n - 1$$

سوال 7

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$$S_4 = 4S_2 \rightarrow 4a + 6d = 4(a + 2d) \rightarrow 4a + 6d = 4a + 8d \rightarrow 6d = 8d \rightarrow d = 0$$

$$\frac{a_1 + a_2 + a_3 + a_4}{4} = \frac{4a + 6d}{4} = a + \frac{3d}{2}$$

$$\frac{a_1 + a_2 + a_3 + a_4}{4} = \frac{4a + 6d}{4} = a + \frac{3d}{2}$$

$$\begin{aligned}
 & \left(\begin{array}{l} a_1 = 11 \\ a_2 = 20 \\ a_n = 35 \end{array} \right) \rightarrow a_2 = 22
 \end{aligned}$$

$$\begin{aligned}
 & a_1 \quad a_2 \quad a_3 \quad a_4 \\
 & b_n = 11, \frac{11}{2}, \frac{11}{4}, \frac{11}{8}, \frac{11}{16}, \dots
 \end{aligned}$$

سوال ۱: $\leq$ دالة حسابی

$$r = \frac{a_2 - a_1}{n+1} \rightarrow d = \frac{-11}{16} = -\frac{11}{16}$$