

17, 18

بدون اسم و صنف

Apr 11

تلف شماره 14

سوال 1: (1, 5)
الف)

$$a_n = \frac{1}{r}, 1, 2, \dots$$

$$a_n = aq^{n-1} = \frac{1}{r} r^{n-1} \quad a_{10} = \frac{1}{r} \times r^9 = 254 \quad \checkmark$$

$$a_{14} = aq^{14} \quad a_{12} = aq^{12}$$

$$q = \frac{254}{r} \quad \text{X}$$

$$\frac{1}{r} r^9 > \frac{1}{r} r^{12}$$

$$\frac{aq^{14}}{aq^{12}} = q^2 = r^2 = 14 \quad \checkmark$$

$$\frac{a_{14}}{a_{12}} = \dots$$

$$b^2 \cdot ac \rightarrow a_r \times a_n = a_n \times a_n \rightarrow r_n - 12 = n - 14 \quad \text{X}$$

$$a_n = aq^n = \frac{1}{r} \times r^n = r^n$$

سوال 2: (1, 7, 5)

$$a_{10} = 252 \quad aq = \frac{a_{10}}{q} = \frac{252}{r} = 121$$

$$a_0 = 12$$

$$a_1 = a_0 \times q^r$$

$$12 \times q^r = 94$$

$$\frac{94}{12} = q^r = 1 \quad q = 2 \quad \checkmark$$

سوال 3: (1, 7, 5)

$$a_1 = 94$$

$$a_n = aq^{n+1}$$

$$12 = \dots$$

$$14 \times q = 12 \quad a = \frac{r}{r}$$

$$= 384$$

$$a_1 \times a_2 \times a_3 \times a_4 \times a_5 = 252$$

$$a_r^d = 252 \rightarrow a_r = 2 \quad \checkmark$$

$$a_1 \times a_2 \times a_3 \times a_4 \times a_5 = \dots$$

سوال 4: (1, 7, 5)

$$a_1 \times a_2 = (a_r)^r = 9$$

ب. 1

$$r^b, r\sqrt{r}, r^a$$

$$a+b$$

وقت!

$$r^b \times r^a = (r\sqrt{r})^r \quad r = r^2$$

$$a+b = 5$$

سوال 5: (1, 7, 5)

$$a_1 = 1 \quad a = d$$

$$\frac{a+b}{r} = \frac{a}{r} = \text{X } 1, 5$$

$$a_1, a_r, a_n$$

$$aq^4 = aq^1$$

$$aq^4 = aq^1 \quad a = q^3$$

$$a_r = aq^r$$

$$a_v = aq^v$$

$$a_n = aq^n$$

سوال 6: (1, 7, 5)

$$1-r, r, r+1$$

$$r^r = (1-r)(r+1) = r^r = r+1 - r^r - r \quad r^r = 1 - r^r$$

$$a_r = q^r \quad a_v = q^1 \quad a_n = q^{12}$$

$$\frac{aq^4}{aq^r} = q^r = \frac{r}{1-r} \quad \frac{aq^1}{aq^4} = q^r = \frac{r+1}{1-r}$$

$$\frac{r+1}{r} = \frac{r}{1-r} = r^r = (1-r)(r+1) = 1 - r^r$$

$$r^r = 1 \quad r^r = \frac{1}{r}$$

$$\frac{1}{r^r} = \frac{1}{r}$$

غیر قابل تعریف غیر حقیقی

سوال 10 بحسب : $S_n = a \frac{1-q^n}{1-q} = a + aq + aq^2 + \dots + aq^{n-1}$ ($q \neq 1$)

$$(S_n = a + aq + aq^2 + \dots + aq^{n-1}) \times q$$

$$qS_n = aq + aq^2 + aq^3 + \dots + aq^n \quad S_n - qS_n = (a + aq + \dots + aq^{n-1}) - (aq + aq^2 + \dots + aq^n)$$

$$S_n(1-q) = a - aq^n \quad q \neq 1 \Rightarrow S_n = \frac{a - aq^n}{1-q} = a \frac{1-q^n}{1-q} \quad \checkmark$$

$$q=1 \Rightarrow S_n = a + a + a + \dots + a = na$$