

کلاس ذکر A

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$$a_1 + a_r + a_p = 21, a_1 \times a_r \times a_p = 4f \rightarrow \frac{a_1}{q} \times a_r \times a_p = a_r^3 = 4f \rightarrow a_r = f$$

$$a_1 \times a_p = 14 \rightarrow a_1^2 q^r = 14$$

$$a_1 + a_p = 17 \rightarrow a_1 + a_p q^r = 17 \xrightarrow{a_p q^r = \frac{14}{a_1}} a_1 + \frac{14}{a_1} = 17 \rightarrow a_1^2 - 17a_1 + 14 = 0 \rightarrow a_1 = 1 \text{ یا } 14$$

$$a_1 = 14, a_r = f \rightarrow q = \frac{1}{f} \checkmark \quad a_1 = 1, a_r = f \rightarrow q = f \text{ غلط } (q \notin W) \quad \leftarrow$$

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$$x^2 + f, 2x, x^2 - 2 \rightarrow f x^2 = (x^2 + f)(x^2 - 2) = x^4 + 2x^2 - 2 \rightarrow x^4 - 2x^2 - 1 = 0 \rightarrow (x^2 - f)(x^2 + 2) = 0$$

$$x^2 - f = 0 \rightarrow x = \pm \sqrt{f} \quad \leftarrow$$

$$x = 2 \rightarrow 1, f, 2 \rightarrow q = \frac{1}{f}$$

$$x = (-2) \rightarrow 1, -f, 2 \rightarrow q = -\frac{1}{f} \text{ غلط } (q > 0)$$

$$S_v = 14 \left( \frac{1 - (\frac{1}{f})^v}{1 - \frac{1}{f}} \right) = \frac{14v}{\frac{1-f}{f}} = \frac{14v}{f} \times 1 = \frac{14v}{f}$$

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$$1 + q + q^2 + q^3 + q^4 = \frac{121}{11}, a_1 = 243$$

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$$S_\omega = a_1 + a_1 q + a_1 q^2 + a_1 q^3 + a_1 q^4 = a_1 (1 + q + q^2 + q^3 + q^4) = 243 \times \frac{121}{11} = 2727$$

$$a_1 = 1, a_v = 4f \rightarrow a_v = a_1 + 5d = 4f \rightarrow 1 + 5d = 4f \rightarrow d = \frac{4f-1}{5} = \frac{41}{5} = 8.2 \rightarrow a_f = 1 + \frac{4(8.2)}{41} = 32.2$$

$$t_1 = 1, t_v = 4f \rightarrow t_v = t_1 q^5 = 4f \rightarrow 1 \times q^5 = 4f \rightarrow q = \pm 2 \rightarrow t_f = \pm 1$$

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$$\begin{cases} A = 32.2 \\ B = \pm 1 \end{cases} \Rightarrow \begin{cases} A+B = 32.2+1 = 33.2 \\ A+B = 32.2-1 = 31.2 \end{cases}$$

$$-2f, \frac{-9\omega}{f}, \dots \rightarrow d = \frac{-9\omega}{f} - (-2f) = \frac{1}{f} \rightarrow t_{1,1} = t_1 + 100d = -2f + \frac{100}{f} = 1$$

۵

$$121, a_r, \dots \rightarrow a_r = a_1 q^v = 121 q^v = 1 \rightarrow q = \frac{1}{r}$$

$$a_\mu, a_\nu, a_\lambda \rightsquigarrow a_1 + r d, a_1 + r d, a_1 + \lambda d$$

$$\hookrightarrow (a_1 + r d)^r = (a_1 + r d)(a_1 + \lambda d) \rightarrow a_1^r + r r d^r + \lambda a_1 d = a_1^r + r r d^r + \lambda a_1 d \rightarrow r d^r + \lambda a_1 d = 0$$

$$\begin{aligned} \lambda d^r + a_1 d = 0 &\rightarrow d(\lambda d + a_1) = 0 \rightarrow \boxed{d=0} \\ &\searrow \lambda d + a_1 = 0 \rightarrow \boxed{d = -\frac{a_1}{\lambda}} \end{aligned}$$

$$a_r, a_f, a_\lambda \rightsquigarrow \frac{a_1 + d}{r a_1}, \frac{a_1 + r d}{f a_1}, \frac{a_1 + \lambda d}{\lambda a_1} \rightarrow q = r \rightarrow a_{1,0} = a_1 q^q = \frac{1}{f} \times r^q = \boxed{1 r \lambda}$$

$$(a_1 + r d)^r = (a_1 + d)(a_1 + \lambda d) \rightarrow a_1 + r d^r + r a_1 d = a_1 + r d^r + \lambda a_1 d \rightsquigarrow r d^r - r d a_1 = 0 \rightarrow \begin{aligned} &\rightarrow d = a_1 \\ &\rightarrow d = 0 \text{ } \checkmark \checkmark \checkmark \end{aligned}$$

$$r a_r, r a_f, a_f \rightsquigarrow r a_1 q, r a_1 q^r, a_1 q^r$$

$$\hookrightarrow r a_1 q^r - r a_1 q = a_1 q^r - r a_1 q \rightsquigarrow a_1 q(r q - r) = a_1 q(q^r - r q) \rightsquigarrow r q - r = q^r - r q \rightsquigarrow q^r - r q + r = 0$$

$$(q-1)(q-r) = 0 \Rightarrow q = 1 \text{ } \checkmark \checkmark$$

$$q = 1 \rightarrow \checkmark \checkmark \checkmark \Rightarrow \boxed{q = r}$$

$$r, \frac{V}{f}, \dots \rightsquigarrow d = -\frac{1}{f} \rightarrow a_f = r + \frac{r(-1)}{f} = \frac{r}{f}, a_\lambda = r + \frac{V(-1)}{f} = \frac{1}{f}, a_{1r} = r + \frac{1r(-1)}{1f} = (-1)$$

$$\hookrightarrow a_f + K, a_\lambda + K, a_{1r} + K \rightsquigarrow \frac{r}{f} + K, \frac{1}{f} + K, (-1) + K \rightsquigarrow \left(\frac{1}{f} + K\right)^r = \left(\frac{r}{f} + K\right)(K-1)$$

$$\frac{1}{1f} + K^r + \frac{K}{f} = K^r - \frac{r}{f} + \frac{K}{f} \rightsquigarrow \frac{K}{f} = -\frac{r}{1f}$$

$$\Rightarrow \underline{\underline{K = -\frac{r}{f}}} \left\{ \begin{aligned} &-f, -a, -\frac{r}{f} \Rightarrow \boxed{q = \frac{r}{f}} \end{aligned} \right.$$

$$a_1, a_f, a_v, \quad a_1 + a_f + a_v = V^r$$

$$a_1 = t_1, a_f = t_r, a_v = t_1.$$

$$a_f - a_1 = \frac{a_v - a_f}{\lambda} \rightsquigarrow a_1(q^r - 1) = \frac{a_1 q^r(q^r - 1)}{\lambda} \rightarrow 1 = \frac{q^r}{\lambda} \rightarrow \underline{\underline{q = r}}$$

$$a_1 + a_1 q^r + a_1 q^r = a_1(1 + q^r + q^r) = a_1(1 + \lambda + r f) = V^r a_1 = V^r \rightarrow \boxed{a_1 = 1}$$

$$a_1 = t_1 = 1 \quad t_r = a_f = r^r \times 1 = \lambda \rightsquigarrow t_r - t_1 = \lambda - 1 = \boxed{V}$$