

$$44 = \sqrt{(a_1 a_2)^2} \Rightarrow a_1^2 a_2^2 = 44 \quad a_1 + a_2 + a_1^2 = 21$$

$$\Rightarrow a_1 a_2 = 4$$

$$\Rightarrow \frac{4}{a_1} + 4 a_1 = 17 \Rightarrow a_1 = \frac{1}{4} \quad a_2 = 16$$

$$n^4 + 2n^2 - 1 = 4m^2 \Rightarrow n^2 - 2m^2 - 1 = 0$$

$$\Rightarrow n = 2, m = 1 \quad a_1 = 2, a_2 = 1$$

$$a_1 + a_1^2 + a_1^3 + a_1^4 = \frac{4}{a_1} \Rightarrow a_1 = \frac{1}{4}$$

$$a_1 = 16$$

$$S_n = n^2 \left(\frac{1 - (\frac{1}{4})^n}{\frac{1}{4}} \right) = \frac{224}{4} = 56$$

$$44 = 2^4 \quad 2^4 a^4 = 44 \Rightarrow 2$$

$$A + B = 2$$

$$A + B = 2 \quad A = 1, B = 1$$

$$A = 1, B = 1$$

$$A = \frac{1}{4} \Rightarrow a_{1,1} = -24 + 24 = 1 \Rightarrow t_n = 1, t_1 = 2$$

$$a_1 = \frac{1}{4}$$

$$(a+rd)(a+rd) = (a+rd)^2 \Rightarrow a^2 + 1 \cdot ad + 1 \cdot rd + rd^2 = a^2 + 2ad + rd^2$$

$$-rad - r \cdot d = 0 \rightarrow ad + 1 \cdot d = 0$$

$$\xrightarrow{\text{cancel}} \rightarrow (d=0) \leq d = \frac{a}{1}$$

$$(a+rd)(a+rd) = (a+rd)^2 \rightarrow rad - rd^2 = 0 \rightarrow a = d$$

$$q = r \quad b_r = \frac{r}{b_1} = \frac{r}{\frac{1}{2}} = 2r$$

$$raq + aq^2 = \epsilon aq^2 \rightarrow q = r + \sqrt{r}$$

$$\rightarrow q \neq 0 \rightarrow q = r - \sqrt{r}$$

$$a_f = \frac{a}{f} \quad a_n = \frac{1}{\epsilon}$$

$$a_{1/2} = -1 \rightarrow (n + \frac{a}{f})(n-1) = (n + \frac{1}{f})^2 \rightarrow a = \frac{a}{\epsilon}$$

$$\Rightarrow \frac{-n}{\epsilon} - \frac{1}{f} = 0 \rightarrow n = \frac{-1}{\epsilon}$$

$$ra + 1 \cdot d = r^2$$

$$ad^2 = a + d$$

$$1 + a^2 + a^4$$

$$d = r$$

$$d = v$$

the end.....