

$$t_1 + t_1 r + t_1 r^2 = 21$$

$$\frac{a}{q} \times a \times a q = 96 \Rightarrow a^2 = 96 \Rightarrow a = 4$$

$$\frac{r}{q} + 4 + 4q = 21 \xrightarrow{\times q} 4 + 4q + 4q^2 = 21q$$

$$\rightarrow 4q^2 - 17q + 4 = 0$$

$$4q^2 - 17q + 4 = 0 \Rightarrow (q-1)(q-14) = 0 \Rightarrow q = 1 \text{ or } 14$$

$$4a^2 = a^2 + 2a^2 - 8 \Rightarrow a^2 - 2a^2 - 8 = 0$$

$$(a^2 - 4)(a^2 + 2) = 0 \Rightarrow a^2 = 4 \Rightarrow a = \pm 2$$

$$1 \text{ if } a = 2 \Rightarrow 2, 6, 4, 8 \Rightarrow 57 = 2 \times \left( \frac{2^5 - 1}{2 - 1} \right) = 254$$

$$t_1 = 144 \Rightarrow t_1 + t_1 r + \dots + t_1 r^5 = t_1 (1 + r + r^2 + r^3 + r^4 + r^5)$$

$$144 \times \frac{121}{11} = 1584$$

$$1000000 \times 64 \Rightarrow 1 + 6d = 64 \Rightarrow 6d = 63 \Rightarrow d = \frac{21}{2}$$

$$t_4 = 1 + \left( \frac{21}{2} \times 3 \right) = 32.5$$

$$1000000 \times 64 \Rightarrow 1 \times r^3 = 64 \Rightarrow r = 4$$

$$t_4 = 1 \times r^3 = 1$$

$$32.5 + 8 = 40.5$$

$$-144 - \frac{96}{r} \dots \Rightarrow t_{10} = t_1 + 10d \Rightarrow -\frac{96}{r} + 15 = 1$$

$$128, a_2, \dots \Rightarrow t_8 = 1 \Rightarrow 128 \times r^7 = 1 \Rightarrow r^7 = \frac{1}{128} \Rightarrow r = \frac{1}{2}$$

$$\text{مسئله} = \frac{t_1 + r_d}{a} \cdot \frac{t_1 + r_d}{b} \cdot \frac{t_1 + r_d}{c}$$

$$b^r = ac \Rightarrow (t_1 + r_d)^r = (t_1 + r_d)(t_1 + r_c) \Rightarrow t_1^r + r_d t_1 + r_d^r = t_1^r + r_d t_1 + r_c^r$$

$$-r_d r^r = r_d t_1 \Rightarrow t_1 = -1 \cdot d$$

$$\rightarrow -r_d \cdot -r_d \cdot -r_d \rightarrow r = \frac{1}{r}$$

$$\text{مسئله} = \frac{t_1 + d}{a} \cdot \frac{t_1 + r_d}{b} \cdot \frac{t_1 + v_d}{c}$$

$$b^r = ac \Rightarrow t_1^r + r_d t_1 + r_d^r = t_1^r + r_d t_1 + v_d^r$$

$$r_d t_1 = r_d^r \Rightarrow d = t_1$$

$$\frac{t_1 + d}{r_d} \cdot \frac{t_1 + r_d}{r_d} \cdot \frac{t_1 + v_d}{v_d} \Rightarrow r = r \Rightarrow t_1 = t_1 r^q \Rightarrow \frac{1}{r} \times r^q = 1 \Rightarrow r = 1$$

$$\text{حاصل} = \frac{r t_1 r}{a} \cdot \frac{r t_1 r}{b} \cdot \frac{r t_1 r}{c}$$

$$b = \frac{a+c}{r} \Rightarrow r b = a+c \Rightarrow r t_1 r = r t_1 r + t_1 r^r \Rightarrow r t_1 r^r = t_1 (r + r^r)$$

$$\rightarrow r r^r = r + r^r \Rightarrow r^r - r r + r = -$$

$$(r-1)(r-r) = 0 \Rightarrow r = 1$$

$$\text{حاصل} = \frac{\Lambda}{r} \cdot \frac{v}{r} \cdot \dots$$

$$\text{مسئله} = \frac{\omega}{r} + x \cdot \frac{1}{r} + x \cdot x - 1$$

$$t_f = \frac{\Lambda}{r} + \frac{r}{r} = \frac{\omega}{r}$$

$$t_a = \frac{\Lambda}{r} - \frac{v}{r} = \frac{1}{r}$$

$$t_{10} = \frac{\Lambda}{r} - \frac{15}{r} = -1$$

$$x + \frac{1}{15} + \frac{x}{r} = x + \frac{x}{r} - \frac{0}{r}$$

$$\frac{x}{r} = -\frac{11}{15} \Rightarrow x = -\frac{11}{15} \cdot r$$

$$-\frac{11}{15} \cdot r - \frac{19}{15} \cdot r - \frac{29}{15} \cdot r \rightarrow r = \frac{19}{11}$$

$$\text{مسئله} = t_1 \cdot t_f \cdot t_v \Rightarrow t_1 \cdot \frac{t_1 + d}{r_d} \cdot \frac{t_1 + v_d}{v_d}$$

$$\rightarrow t_1^r + d^r + r_d t_1 = t_1^r + r_d t_1 + v_d^r \Rightarrow d^r = v_d^r \Rightarrow d = v t_1$$

$$\frac{t_f}{t_1} = \Lambda \Rightarrow r^r = \Lambda \Rightarrow r = r \Rightarrow t_1 (1 + r^r + r^r) = v r \Rightarrow t_1 = 1$$

$$t_f = \Lambda \Rightarrow t_1 + r_d = \Lambda \Rightarrow r_d = v \Rightarrow d = \frac{v}{r}$$