

الكلية

$$a_1 = 41 = \cancel{20} + r d \Rightarrow r d = 41$$

$$q_n = \sqrt{n} + r$$

$$1.90 \leq v_n + r \leq 999 \Rightarrow 98 \leq v_n \leq 999$$

$$\Rightarrow 120 - 12 \times 1 = 108$$

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$$a_r + a_r + a_r = 7$$

$$r_9 r = 7$$

$$q_r = r$$

$$a_n = a_{n-1} - r \Rightarrow a_1 = 7$$

$$a_1 + a_2 = 2a_1 + 2r = -5$$

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$$a \xrightarrow{\text{gas/water}} a_n \xrightarrow{\text{gas/water}} a_{1n} \Rightarrow \frac{a_n + a_{1n}}{2} = a_n$$

$$\frac{x - \phi - y^{2x} - 1^0}{1} = y^{x+1}$$

[illegible]

~~$$(x+1)(x-1) = x^2 - 1 \Rightarrow (x-1)(x+1) = x^2 - 1$$~~

~~$$x^2 - 1 = x^2 - 1$$~~
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$$\Rightarrow r^{x+r} = r^{rx} + r^x - \epsilon = r^x(r^x) - \epsilon = r^{x+r}$$

$$(r^x)^r - \epsilon = r^x \times \epsilon$$

$$(r^x - r)(r^x + r) = r^{x+r}$$

$$a_{1,1} - a_{1,r} = 0 \quad (1)$$

$$a_{1,1} + a_{1,r} = 1 \Rightarrow r a_{1,1} = r$$

$$a_{1,1} = 1 \Rightarrow a_{1,r} = 1 = a_{1,r} \quad (2)$$

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

$$a_{r,1} = a_{1,1} + 11d = 1 - r(1) = -r(1)$$

$$a_1 + a_2 + \dots + a_r + a_{r+1} + a_{r+2} = \frac{1}{r} (a_1 + a_2 + \dots + a_r + a_{r+1} + a_{r+2})$$

$$\Rightarrow r a_1 + r a_2 + \dots + r a_r + r a_{r+1} + r a_{r+2} = a_1 + a_2 + \dots + a_r + a_{r+1} + a_{r+2}$$

$$\frac{1}{r} (a_1 + a_{r+1}) = \frac{1}{r} \times \frac{1}{r} (a_1 + a_{r+1}) = \frac{1}{r} (a_1 + a_{r+1})$$

$$\Rightarrow \frac{a_1 + a_{r+1}}{a_1 + a_{r+1}} = \frac{1}{r} = r \Rightarrow r a_1 + r a_{r+1} = a_1 + a_{r+1}$$

$$r(a_1 + a_{r+1}) = a_1 + a_{r+1}$$

$$r a_1 = r a_{r+1} \Rightarrow r a_{r+1} = a_1$$

$$r a_{r+1} = a_1 + r d$$

$$\Rightarrow r a_{r+1} = r d$$

$$r a_{r+1} = r d$$

$$\Rightarrow r a_{r+1} = d \Rightarrow a_{r+1} = a_1$$

$$\frac{a_r}{a_1} = \frac{a_1 + d}{a_1} = \frac{1 + r d}{1} = r$$

$$t_n = t_{n-1} + 10$$

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$$t_2 = t_1 + 10 = t_1 + 10 \Rightarrow d = 10$$

$$t_n - t_0 = (t_1 - t_0) + (t_2 - t_1) + \dots + (t_n - t_{n-1}) = 10 + 10 + \dots + 10 = 10n$$

$$\Rightarrow \frac{t_n - t_0}{n} = \frac{10n}{n} = 10 = \frac{10 - (t_1 - t_0)}{1 - 0} = 10$$

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مربعين، 1 و 2

$$a_1 = 1(1 - \sqrt{2})$$

$$a_{12} = 1 + \sqrt{2} = a_1 + 10d \Rightarrow 10d = 10\sqrt{2}$$

$$\Rightarrow d = \sqrt{2}$$

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

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$$a_{n+1} = 11 = a_1 + nd \Rightarrow nd = 9$$

$$a_1 = 2$$

$$d = \frac{11 - 2}{n + 1} = \frac{9}{n + 1} \Rightarrow 9 = (n + 1)d \Rightarrow d = 9 \Rightarrow a_{n+1} = 2 + 9n = 11$$

$$\Rightarrow n = 1$$

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مربعين

$$a_n + a_{n+1} = a_1 + a_2$$

$$\Rightarrow n + n + 1 = 1 + 2$$

$$\Rightarrow 2n = 2 \Rightarrow n = 1$$

$$\Rightarrow a_n = 1(n + 1)$$

$$d = 10 \Rightarrow 10a_1 + 10d = 0$$

$$a_1 = a_1 + d = 0 \Rightarrow a_1 = 0$$