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$$a_1 = f_0, a_f = 41 \Rightarrow a_1 + 2d = 41 \Rightarrow d = V$$

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$$201 = f_0 + Vn - V \Rightarrow Vn = 1V \Rightarrow \boxed{h = 2d} \checkmark$$

$$V \times 1d = 10d, V \times 14 = 112,$$

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$$\begin{aligned} & \text{101, 101, 112, 122} \Rightarrow Vn + 101 \Rightarrow Vn + 101 < 1000 \Rightarrow h < 128 \\ & \text{101} + V \quad \text{112} + V \\ & \Rightarrow \boxed{128} \end{aligned}$$

$$\text{اولین عدد: } 14(V) + 3 = 101$$

$$\text{آخرین عدد: } 142(V) + 3 = 997$$

$$101 + (n-1)V = 997 \rightarrow \boxed{n = 129}$$

$$\begin{aligned} a_v + a_n + a_9 &= -2f \Rightarrow a_1 + 9d + a_1 + 1d + a_1 + 1d = -2f \Rightarrow a_1 + 11d = -1 = a_1 \\ a_{14} + a_n + a_n &= -V1 \Rightarrow 3a_1 + 41d = -V1 \Rightarrow a_1 + 14d = -24 \end{aligned} \left. \begin{array}{l} \\ \end{array} \right\} \begin{array}{l} a_n + a_1 = -2f \\ \end{array} \Rightarrow \boxed{128} \checkmark$$

$$t_1 + 9d - t_1 - 11d = -2 \Rightarrow d = + \frac{2}{2} a_{12} - a_{10} = 2$$

سوال لغتہ ۱۰۱۰ رو از ۱۰۱۲ لغتہ

$$t_1 + 9d + t_1 + 11d = 2d \Rightarrow 2t_1 - 2 = 2d \Rightarrow t_1 = d - 1$$

$$\begin{aligned} & \text{(1)} \quad t_1 + 10d = 1000 \\ & \text{(2)} \quad t_1 + 11d = 1000 \end{aligned}$$

$$t_1 + t_2 + \dots + t_n = \frac{t_1 + t_n}{2} \Rightarrow d t_1 + 10d = \frac{t_1 + 12d}{2} \Rightarrow 2t_1 = d$$

$$\Rightarrow t_2 = x t_1 \Rightarrow t_1 + d = x t_1 \Rightarrow 2t_1 = x t_1 \Rightarrow \boxed{x = 2} \checkmark$$

$$d = \frac{b-a}{n+1} = \frac{x + \sqrt{x} - x + 12\sqrt{x}}{12} = \frac{12\sqrt{x}}{12} = \boxed{\sqrt{x}} \checkmark$$

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