

$$\frac{a_1}{q} \times a \times a q = 4 \Rightarrow a = 4, \frac{4}{q} + 4 + 4q = 21 \Rightarrow \frac{4}{q} + 4q = 17 \Rightarrow q = \frac{4}{17}$$

$$\begin{aligned} (x^2 - 1) &= x^2 + 4x^2 + 4x + 1 \Rightarrow x^2 + 4x + 1 = 0 \Rightarrow x = -2 \pm \sqrt{3} \Rightarrow a_1 = 2, q = 17 \\ \frac{x^2 - 1}{x^2 + 4} &= \frac{17}{x^2 + 4} \Rightarrow x^2 - 17x^2 - 1 = 0 \Rightarrow x = 17 \Rightarrow a_1 = 17, q = 17 \\ &= \frac{1}{17} \left( \frac{1 - (\frac{1}{17})^n}{\frac{1}{17}} \right) \end{aligned}$$

$$q_1 + a_1 q + a_1 q^2 + a_1 q^3 + a_1 q^4 = a_1 (1 + q + q^2 + q^3 + q^4) = 25 \left( \frac{1 - 17^5}{17} \right) = 1742$$

$$d = \frac{b - a}{n + 1} = 10/11 \Rightarrow d = 11/11 \Rightarrow q^{n+1} = \frac{b}{a} \Rightarrow q^5 = 4 \Rightarrow q = 2 \Rightarrow A + B = 4/11$$

$$-\frac{9x}{x} - \frac{9d}{x} \Rightarrow d = \frac{1}{x} \Rightarrow -15 + \frac{(n-1)}{x} = 1 \Rightarrow \frac{n-1}{x} = 16 \Rightarrow n = 17$$

$$1 = a_1 q^n \Rightarrow 1 = 17 \cdot q^n \Rightarrow q^n = \frac{1}{17} \Rightarrow q = \frac{1}{17}$$

$$q^2 - q + 1 = 0 \Rightarrow q = 1 \quad d = 0, q = 1 \Rightarrow a_1 = -10d$$

$$a_n = a_1 + (n-1)d = -10d + (n-1)d = (n-11)d \Rightarrow q = \frac{1}{17}$$

$$q = 10 \Rightarrow \text{what?} \quad 17q^2 = 17q + 1 \Rightarrow q(q-1)(q-17) = 0$$