

39
(321)

$$\begin{cases} a_1 + a_2 = 5 \\ a_2 = \frac{2}{3} + \frac{a_3}{1-q} \end{cases}$$

$$\begin{cases} a_1(1+q) = 5 \\ a_1q = \frac{2}{3} + \frac{a_1q^2}{1-q} \end{cases}$$

$$a_1 = \frac{5}{1+q}$$

הצבה במשוואה השנייה

$$\frac{5}{1+q} q = \frac{2}{3} + \frac{5}{1+q} \cdot \frac{q^2}{1-q} \quad | \cdot 3(1+q)(1-q)$$

$$15q(1-q) = 2(1-q^2) + 15q^2$$

$$15q - 15q^2 = 2 - 2q^2 + 15q^2$$

$$28q^2 - 15q + 2 = 0$$

$$q = \frac{1}{4}, \frac{2}{7}$$