

$$x = -1 \Rightarrow a - b + c = 9 \quad x = 3 \Rightarrow 9a + b + c = 1 \quad \frac{-b}{c} = -1 \Rightarrow b = c$$

$$1a + 1a = -A \Rightarrow a = \frac{1}{2}, b = -1 \Rightarrow a - b + c = 9$$

$$\Rightarrow -\frac{1}{2} + 1 + c = 9 \Rightarrow c = \frac{17}{2} \Rightarrow \frac{-2}{c} = -2 + \frac{17}{2} = 0$$

5

$$\Delta > 0 \Rightarrow m^2 - 4(c)(m+4) > 0 \Rightarrow m^2 - 4m - 16 > 0$$

$$\Rightarrow (m-12)(m+8) > 0 \Rightarrow \begin{array}{c} -12 \quad 12 \\ + \quad - \quad + \end{array} \Rightarrow (-\infty, -8) \cup (12, +\infty)$$

10

$$\alpha + \beta = \frac{1}{\alpha \times \beta} \Rightarrow \frac{-b}{a} = \frac{1}{\frac{c}{a}} \Rightarrow \frac{-b}{a} = \frac{a}{c}$$

$$\Rightarrow \frac{-5m+1}{2} = \frac{5}{7-m} \Rightarrow 7m - 5m + 1 = 10 \Rightarrow 2m = 9 \Rightarrow m = \frac{9}{2}$$

15

$$\Rightarrow m^2 - 5m - 16 = 0 \Rightarrow (m-8)(m+2) \begin{cases} m = \frac{16}{5} = 3.2 \checkmark \\ m = \frac{-5}{2} = -2.5 \times \end{cases}$$

$$x_1 + x_2 = 1, x_1 x_2 = -5 \quad x_1^2 + \frac{1}{x_1^2} = A \quad x_2^2 + \frac{1}{x_2^2} = B$$

$$\Rightarrow A + B = \frac{1}{x_2^2} + \frac{1}{x_1^2} + x_1^2 + x_2^2 = \frac{x_1^2 + x_2^2}{x_1^2 x_2^2} + x_1^2 + x_2^2 = 1 + \frac{1}{5} = \frac{6}{5}$$

$$20 \quad AB = \left(\frac{1}{x_2^2} + x_1^2\right)\left(\frac{1}{x_1^2} + x_2^2\right) = x_1^2 x_2^2 + \frac{1}{x_1^2 x_2^2} = -5 + \frac{1}{-5} = -\frac{26}{5}$$

$$\Rightarrow AB = \frac{1}{5} - 5 - \frac{1}{5} = -\frac{26}{5} \Rightarrow -\frac{26}{5} + \frac{1}{5} = -\frac{25}{5} = -5$$

$$x^2 - 1$$

$$\frac{(\sqrt{x^2} + \sqrt{x^2 + 1})(\sqrt{x^2} - 1)}{\sqrt{x^2}} = \sqrt{2} \Rightarrow x^2 - 1 = \sqrt{2} \Rightarrow x^2 - \sqrt{2}x - 1 = 0$$

25

$$\sqrt{x^2}$$

$$\Rightarrow S = \frac{-b}{a} = \frac{-(-\sqrt{2})}{1} = \sqrt{2}$$

$$P = K \cdot B = \frac{K}{\frac{1}{B}} = \frac{K}{\frac{1}{2}} \Rightarrow K = \pm \frac{P}{2} \quad -9$$

$$S = \alpha + \beta \Rightarrow \frac{S}{\alpha} = \frac{a}{1} \Rightarrow \pm \frac{1}{\frac{1}{2}} = \frac{a}{1} \Rightarrow a = \pm 1 \Rightarrow \text{اختلاف} = 19$$

$$C = 0 \Rightarrow \text{مقدار} = 0 \Rightarrow \text{خط} \quad \text{صحيح مقدار} \quad -17$$

$$\Rightarrow \frac{-b}{a} > 0 \Rightarrow \frac{-2-5a}{1} > 0 \Rightarrow \frac{-5}{-1+5} \Rightarrow a \in [-\frac{5}{4}, 0)$$

$$\frac{-b}{a} \Rightarrow \frac{-a}{1} = \frac{5}{-1} \Rightarrow a = 5 \quad -1$$

$$4 + 1 = 5 = 5(1)(b) \Rightarrow 12 = 5b \Rightarrow b = \frac{12}{5}$$

$$a \times b = 2 \times 5 = 10$$

$$\frac{a}{1} + \frac{a}{1} = 1 \Rightarrow \frac{a}{1} + \frac{1}{1} = 1 \Rightarrow a = 0$$

$$\frac{-5}{1} = \frac{-5}{1} = -5 \Rightarrow \frac{b}{1} = -5 \Rightarrow b = -5$$

$$\frac{ab}{1} = \frac{-5}{1} = \left[\frac{-5}{1} \right] = -5$$

$$\begin{aligned} S_A &= P + K \\ S_B &= K + P \end{aligned} \Rightarrow S_A - S_B = 2 - K$$

$$\begin{aligned} S_A &= P + K + M \\ S_B &= K + P + M \end{aligned}$$

$$S_A = -9, S_B = 5 \quad \left\{ \begin{aligned} 2 - K &= -5 - (-9) = +4 \end{aligned} \right.$$