

سوال ۳

الف)

$$S = -\frac{b}{a} = \frac{r(m+1)}{m-r}$$

$$P = \frac{c}{a} = \frac{1}{m-r}$$

$$C < 0, P > 0$$

$$P > 0 \rightarrow \frac{1}{m-r} > 0 \rightarrow m-r > 0 \rightarrow m > r$$

$$\Rightarrow \frac{1}{m-r} < 0 \rightarrow m-r < 0 \rightarrow m < r$$

$$r_1 + r_2 < 0$$

$$S = \frac{r(m+1)}{m-r} < 0$$

$$m-r < 0$$

$$r(m+1) > 0$$

$$m > -1 \iff m+1 > 0$$

$$-1 < m < r$$

1)

الف) $y = x^2 - 4x + 7$

$a = 1 > 0$

$\frac{-b}{2a} = \frac{-(-4)}{2(1)} = 2$
 $y(2) = 2^2 - 4 \times 2 + 7 = 4 - 8 + 7 = 3$
 (2, 3) نس

$\Delta = (-4)^2 - 4(1)(7) = 16 - 28 = -12$

(0, 7) $\leftarrow y(0) = 7$

$\Rightarrow \frac{-b}{2a} = \frac{-(-4)}{2(-1)} = 2$

(2, 3) نس $\rightarrow y(2) = -4 + 8 - 1 = 3$

$b^2 - 4ac = 4^2 - 4(-1) = 16 - 4 = 12 > 0$

$x = \frac{-b \pm \sqrt{\Delta}}{2a} = \frac{-(-4) \pm \sqrt{12}}{2(-1)} = \frac{4 \pm \sqrt{12}}{-2}$