

الف: $(3, 2) = (m, 2)$
 $m = 3$

$$n^2 - n - 2 = 0$$

$$(n-2)(n+1) = 0$$

$$n = 2 \quad \checkmark$$

$$n = -1 \quad \times$$

$$n = 2$$

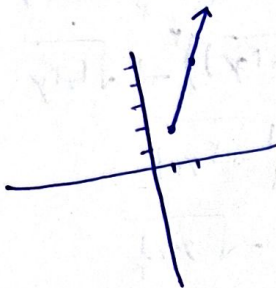
ب: $(2, 3) = (m, 3)$
 $m = 2$

$$(a, 1) = (-1, 1)$$

$$a = -1$$

$$(1, n) = (1, 2)$$

$$n = 2$$

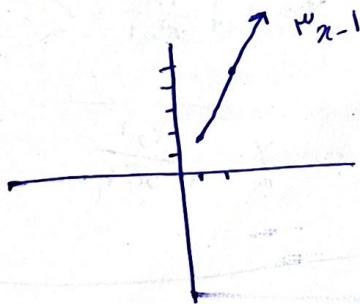


$$n = 1 \quad y = 2$$

$$n = 2 \quad y = \infty$$

$$n = 1 \Rightarrow 1 + a \leq 2$$

$$a \leq 1$$



$$n = 0 \Rightarrow a - 1 < 2$$

$$a < 3$$

الف: $y = x_1^3 + 2$
 $y = x_2^3 + 2$

$$x_1^3 + 2 = x_2^3 + 2$$

$$x_1^3 = x_2^3$$

یک به یک $\checkmark$
 $x_1 = x_2$

$$n = y^3 + 2$$

$$n - 2 = y^3$$

$$y = \sqrt[3]{n-2}$$

ب: ~~سوی است پس یک به یک نیست~~

الف: $\Rightarrow$ صحیح است $\checkmark$ یک به یک $n = \frac{y^3 + 1}{y - 2}$

$$ny - 2n = y^3 + 1$$

$$ny - 3y = 2n + 1$$

$$y(n-3) = 2n+1$$

$$y = \frac{2n+1}{n-3}$$

ب: $\frac{2(2n+1)}{n+2} \Rightarrow y = 2$

$$\times$$

