

②

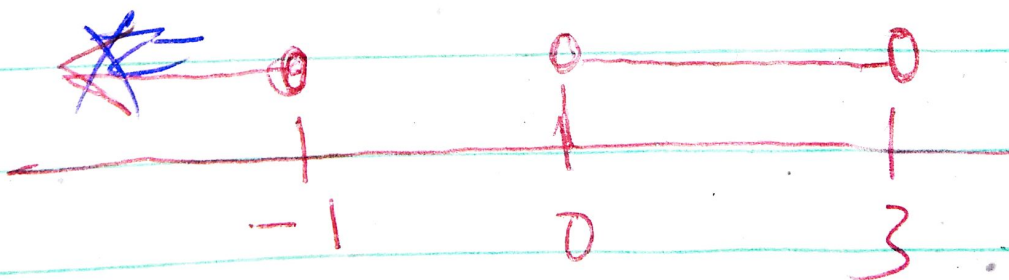
$$f(x) = x^3 + 2x^2 - 3x > 0$$

$$x(x^2 + 2x - 3) > 0$$

$$x > 0,$$

$$x(x-3)(x+1) > 0$$

$$x > 0, x > 3, x > -1$$



$$(-\infty, -1) \cup (0, 3)$$

$$(10) - 5^4 - 2 - 2$$

$$\frac{(1+1)(-1)}{(1+1)(-2)}$$

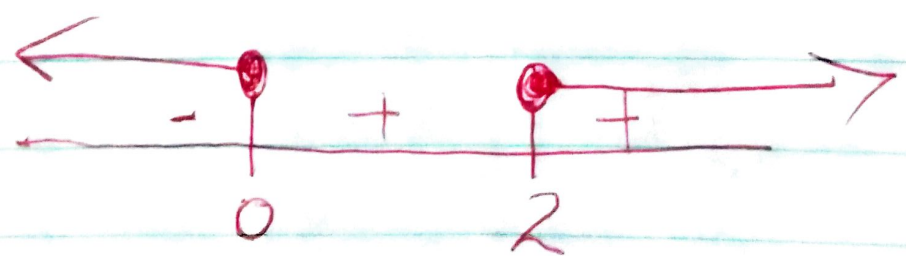
$$g(x) = \frac{x(x^2+1)(x-2)}{(x^2+1)(x-1)} \geq 0$$

* Set the denominator and numerator of the fraction to be equal to zero

$$x(x^2+1)(x-2) = 0$$

$$x^2 = -1 \Rightarrow i$$

$$x = 0 \quad x = 2$$



$$(-\infty, 0] \cup [2, \infty)$$

$$-1+12 \quad (\quad 2+6$$

$$3) \quad x + \cancel{12} < 7$$

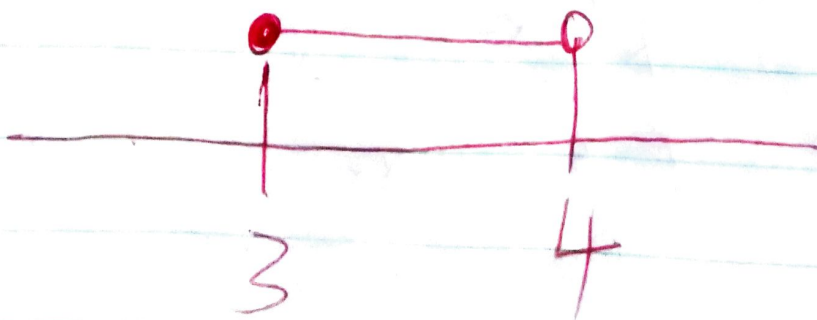
$$x^2 + 12 < 7x$$

$$x^2 - 7x + 12 = 0$$

$$x^2 - 4x - 3x + 12$$

$$(x-4)(x-3) = 0$$

$$x < 4 \quad x < 3 \quad \underline{\underline{}}$$



$$\underline{\underline{[3, 4)}}$$