

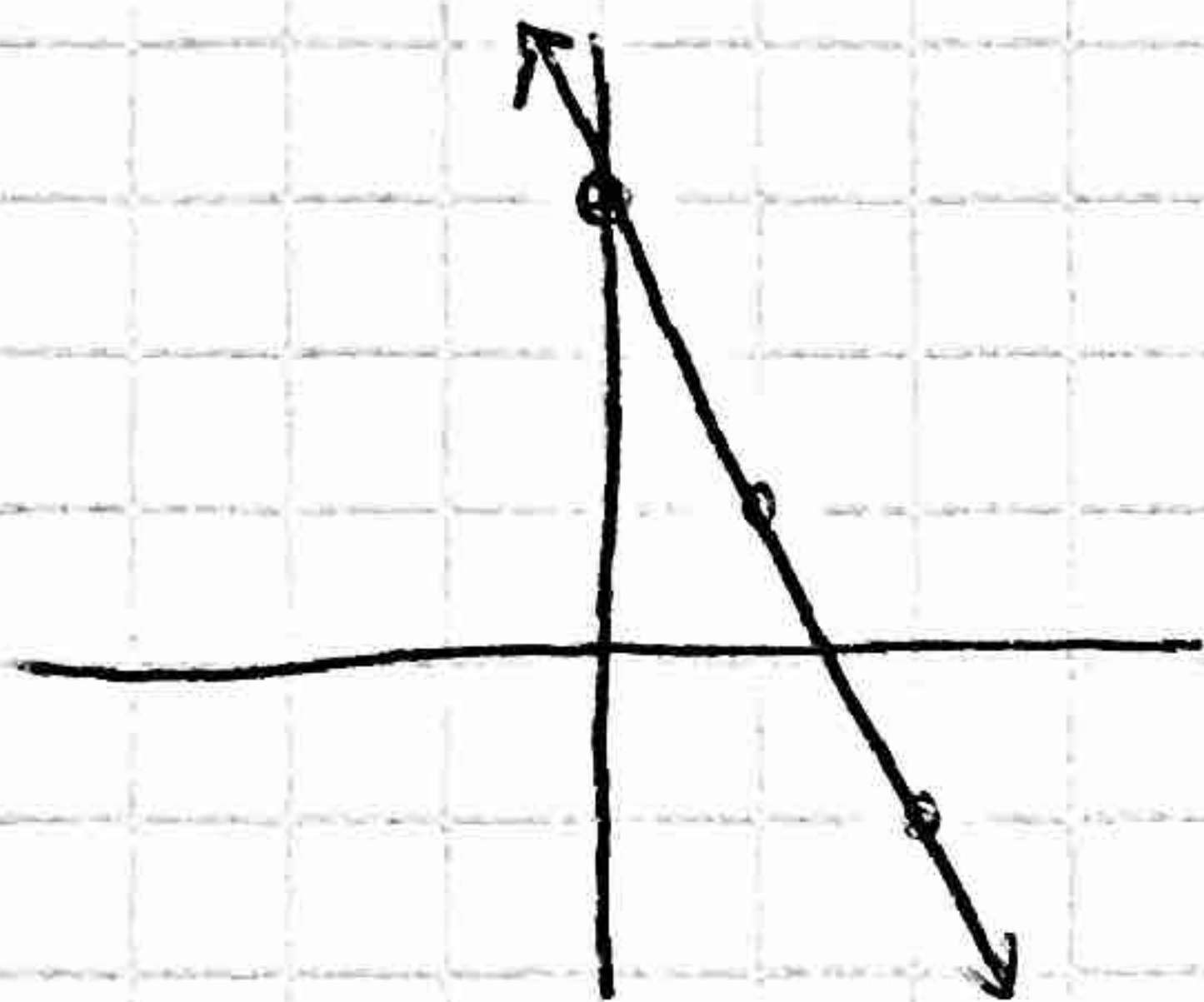
HW 49

p253 # 1, 3-7, 8-9, 11-13, 15, 16

$$m = \frac{7+5}{-2-4} = \frac{12}{-6} = -2$$

$$\begin{aligned} y &= -2x + b \\ 7 &= -2(-2) + b \\ 7 &= 4 + b \\ 3 &= b \end{aligned}$$

$$y = -2x + 3$$



$$5. a) f(7) = \frac{\sqrt{7+9}}{7^2-81} = \frac{4}{-32} = \boxed{-1/8}$$

$$b) f(-5) = \frac{\sqrt{-5+9}}{(-5)^2-81} = \frac{2}{-56} = \boxed{-1/28}$$

$$c) f(x-9) = \frac{\sqrt{x-9+9}}{(x-9)^2-81} = \boxed{\frac{\sqrt{x}}{x^2-18x}}$$

$$6. (-\infty, \infty)$$

$$7. \begin{aligned} 3-x &\geq 0 & (-\infty, 3] \\ 3 &\geq x \end{aligned}$$

$$\begin{aligned} 3. \quad 5x + 2y &= 3 \\ 2y &= -5x + 3 \\ y &= -5/2 x + 3/2 \end{aligned}$$

$$a) y = -5/2 x + 4$$

$$b) y = 2/5 x + 4$$

$$\begin{aligned} 4. a) f(-8) &= |-8+2| - 15 \\ &= |-6| - 15 \\ &= 6 - 15 = \boxed{-9} \end{aligned}$$

$$\begin{aligned} b) f(14) &= |14+2| - 15 \\ &= 16 - 15 = \boxed{1} \end{aligned}$$

$$\begin{aligned} c) f(x-6) &= \frac{|x-6+2|}{|x-4|} - 15 \\ &= \boxed{\frac{|x-4|}{|x-4|} - 15} \end{aligned}$$

8. a) on calc

b) I:
D:
C:

$$c) f(-x) = 2x^6 + 5x^4 - x^2 \checkmark$$

even

9. a) on calc

b) I:
D:
C:

c) neither

11.

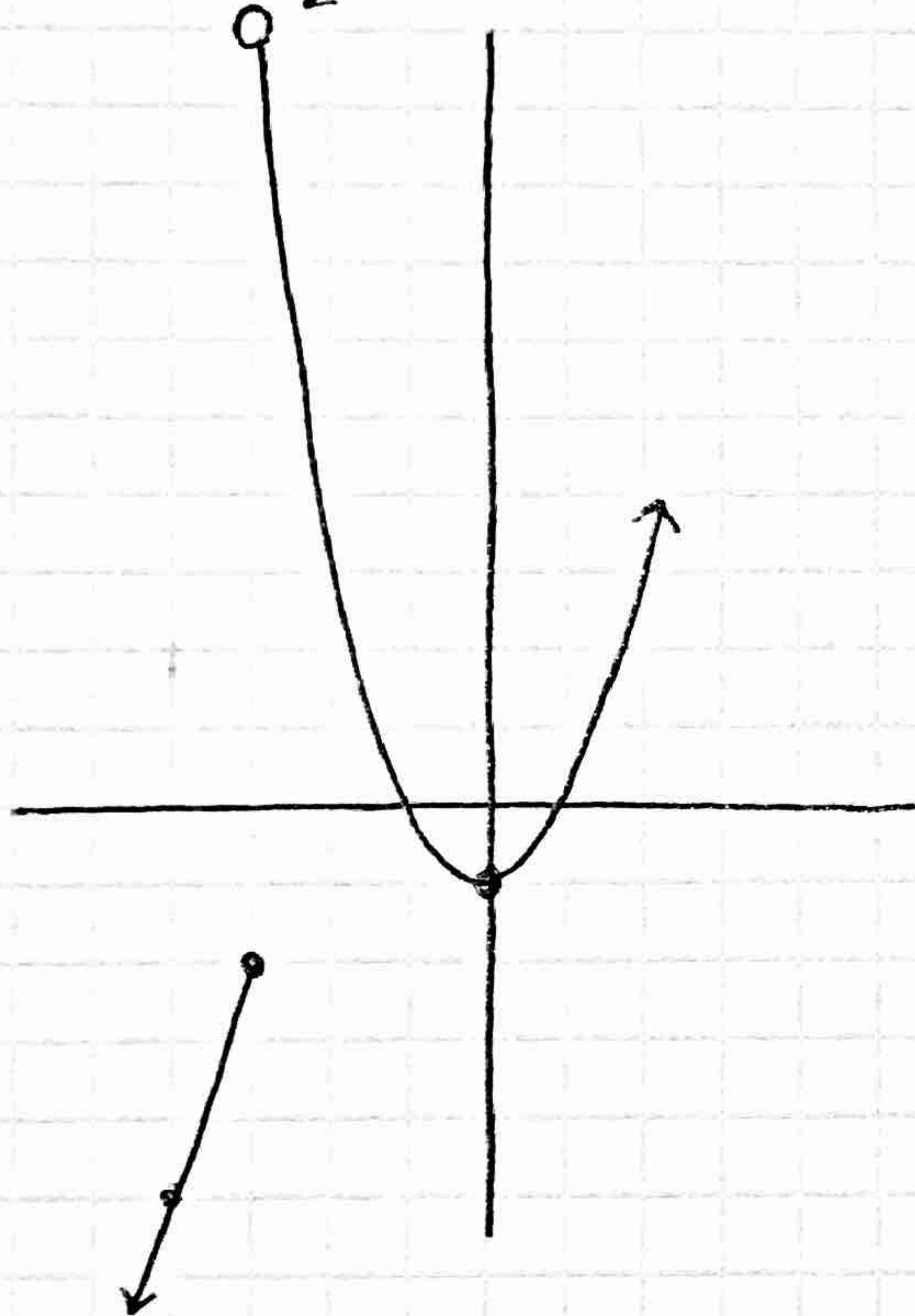
$$12. \frac{f(3) - f(1)}{3 - 1}$$

$$= \frac{-18 + 15 - 3 - (0)}{2}$$

$$= \frac{-6}{2} = \boxed{-3}$$

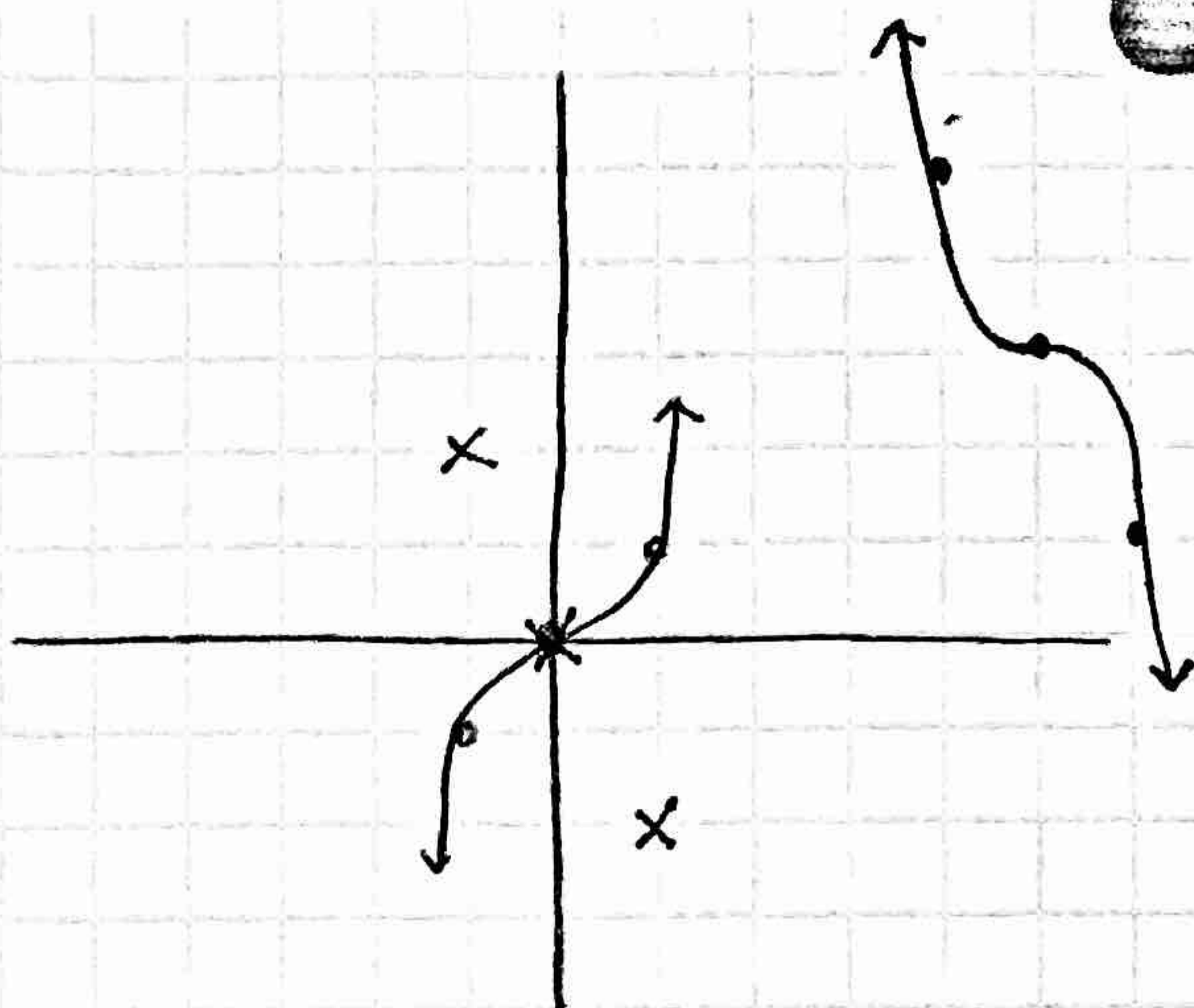
← $y = 35$

13.



16. a) x^3

b) over $x, y \in \mathbb{R}, \mathbb{C}$



15. a) \sqrt{x}

b) over x -axis, \mathbb{L}, \mathbb{U}

