

I can solve equations

10

8.5

7.5

5

$$1.) \begin{array}{r} 2x + 8 = 16 - 6x \\ +6x \quad \quad +6x \end{array}$$

$$8x + 8 = 16$$

$$8x = 8$$

$$\boxed{x = 1}$$

$$2.) \begin{array}{r} \frac{4x+6}{9} + 5 = 10 \\ -5 \quad -5 \end{array}$$

$$9 \cdot \frac{4x+6}{9} = 5 \cdot 9$$

$$\begin{array}{r} 4x+6 = 45 \\ -6 \quad -6 \end{array}$$

$$4x = 39$$

$$x = \frac{39}{4} = 9.75$$

$$3.) (x+4)(x-9) = (x+3)(x+5)$$

$$\begin{array}{r} \cancel{x} + -5x - 36 = \cancel{x} + 8x + 15 \\ +5x - 15 \quad \quad +5x - 15 \end{array}$$

$$\frac{-51}{13} = \frac{13x}{13}$$

$$\frac{-51}{13} = x$$

$$-3.92 = x$$

4.) $-3x + 2y = 12$

$y = 5x - 1$

$$-3x + 2(5x - 1) = 12$$

$$-3x + 10x - 2 = 12$$

$$7x = 14$$

$$x = 2$$

$$y = 9$$

5.) $2y - x = -5$

$x = y + 4$

$$2y - y - 4 = -5$$

$$y - 4 = -5$$

$$y = -1$$

$$x = 3$$

6.) Tory solved a system of equations below. Did she do it correctly? How do you know? If she did not, find her errors and solve the system correctly.

$$\begin{aligned} -2y &= -x + 7 \\ 8y &= 4x + 10 \end{aligned}$$

$$\frac{-2y = -x + 7}{-2} \quad \frac{-2}{-2}$$

$$\frac{8y = 4x + 10}{8} \quad \frac{8}{8}$$

$$\frac{-2y = -x + 7}{-2} \quad \frac{-2}{-2}$$

$$y = \frac{1}{2}x + 3\frac{1}{2}$$

$$8\left(\frac{1}{2}x + 3\frac{1}{2}\right)$$

forgot sign

$$\frac{4x + 28 = 4x + 10}{4x}$$

$$28 = x + 10$$

$$x = 18$$

$$-2y = -18 + 7$$

$$-2y = -11$$

$$y = 5\frac{1}{2}$$

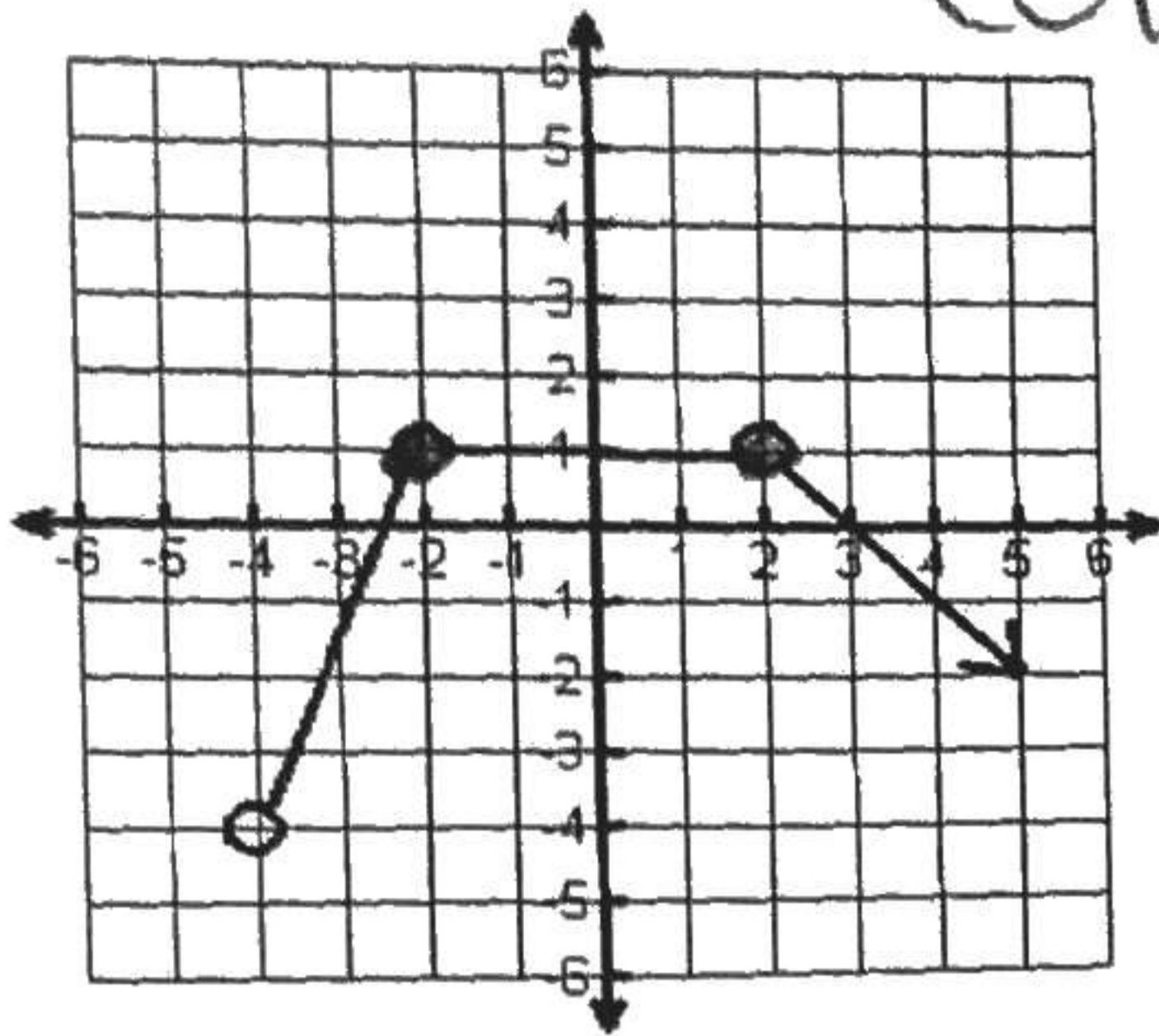
$$(18, 5\frac{1}{2})$$

I can decide whether or not a relation is a function and I can find the domain and range of a relation

10 8.5 7.5 5

10.) Compare the inputs and outputs of each relation below and decide if the relation is or is not a function. Then find the domain and range.

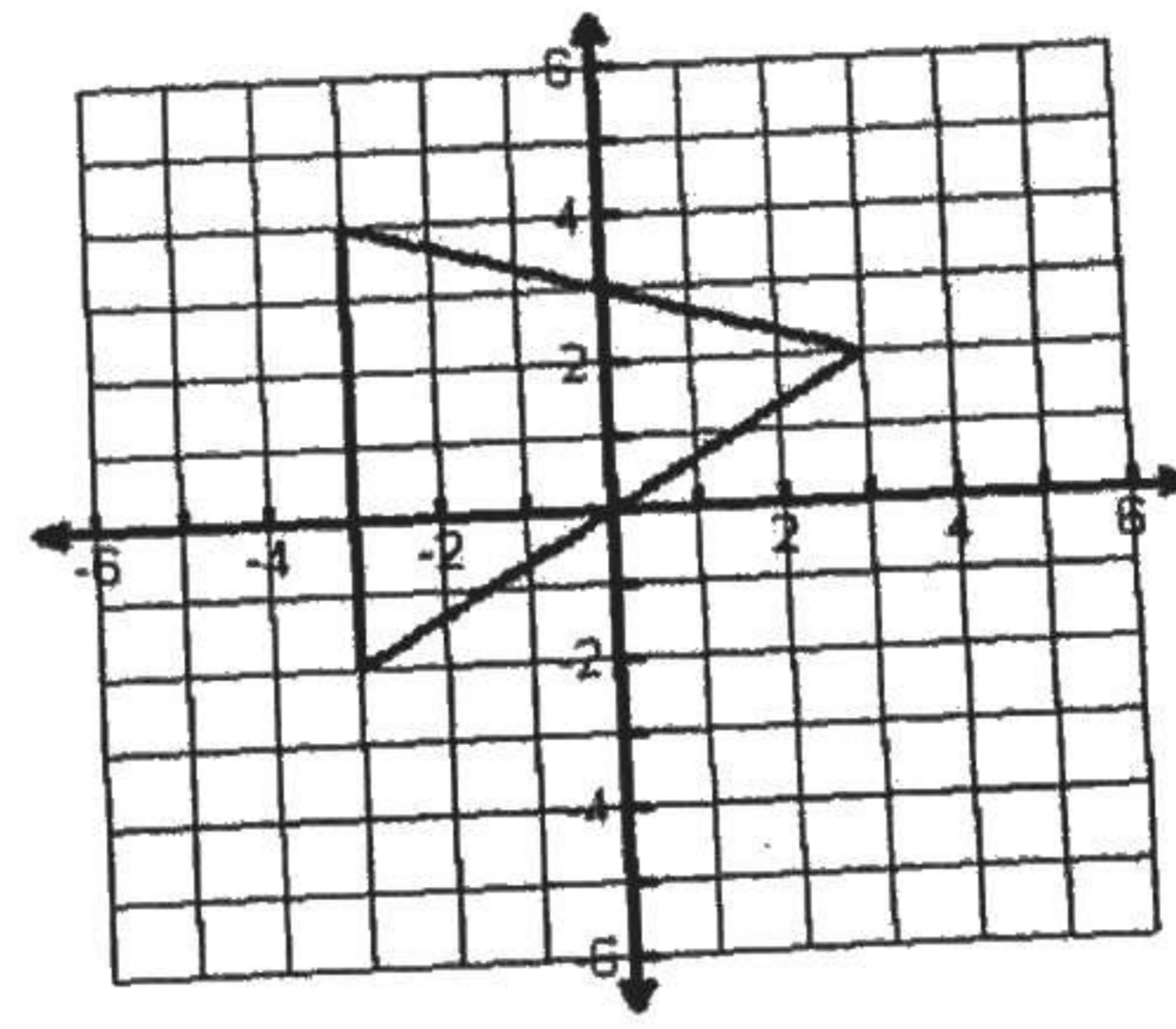
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Yes Fun.

$$D: -4 < x < \infty$$

$$-4 < y \leq \infty$$



No. not function

$$-3 \leq x \leq 3$$

$$-2 \leq y \leq 4$$

11.) Examine the graph below and answer the following questions

a. Describe the domain and range

$$D = -\infty < x < \infty$$

$$R: -3 \leq y < \infty$$

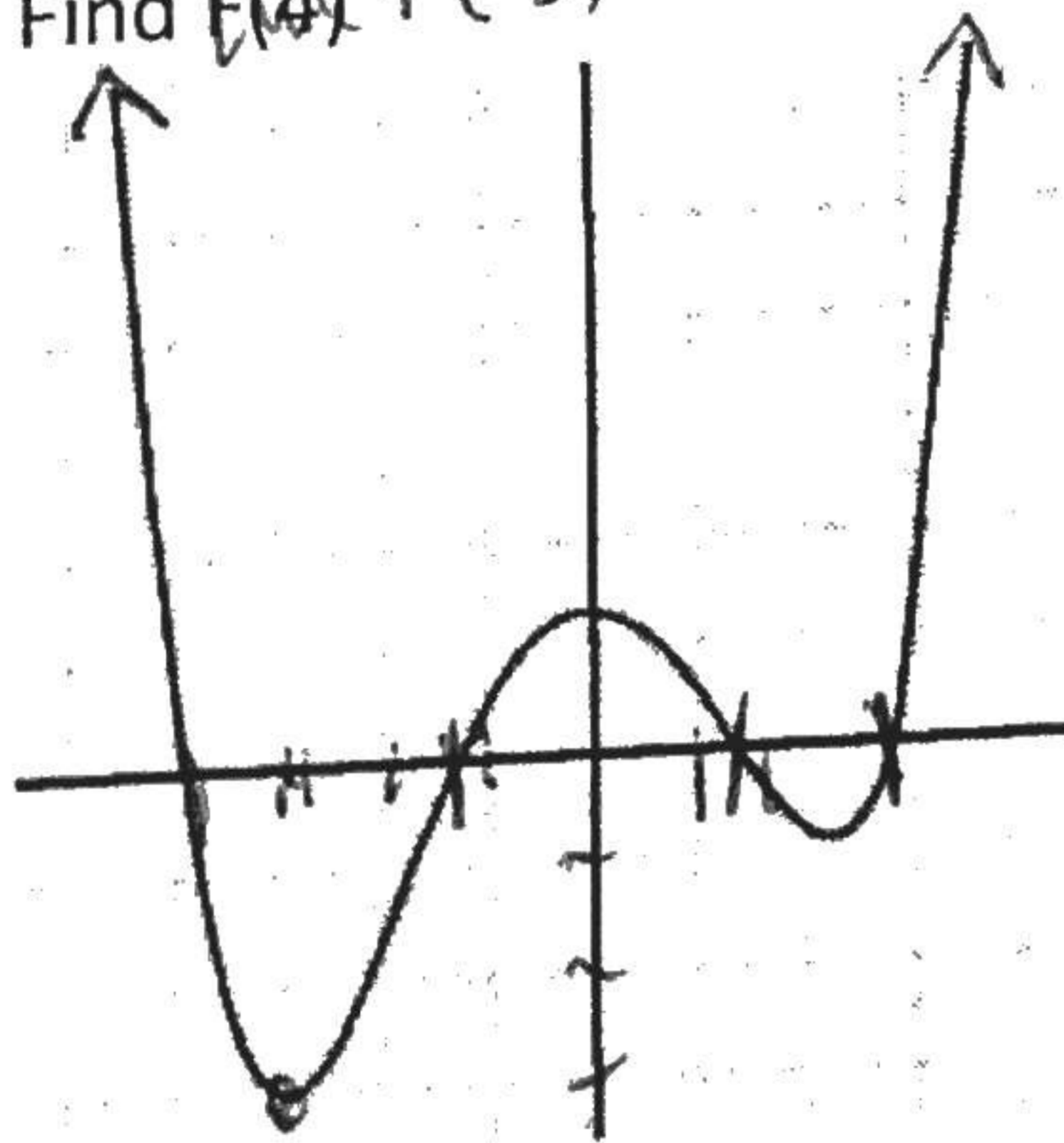
b. Is the graph a function? How can you tell?

yes.

c. Name any special points (i.e. intercepts, minimums, maximums, etc.)

y intercept,

d. Find $f(4)$ $f(-3)$



$$f(-3) = -3$$

12.) Sketch the graph of a relation that is not a function. Explain why it is not a function.



I can solve quadratic equations	10	8.5	7.5	5
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13.) Examine each quadratic equation below and decide which strategy (Factoring or the Quadratic Formula) is best to try. Write justifications for why you chose each method.

a. $0 = 2x^2 - 3x + -20$

b. $0 = 4x^2 + 10x - 25$

$x = 4, -2.5$

14.) Solve for x: $(x + 4)(x^2 + x - 20) = 0$ $(x - 4)(x + 5)$

$x = 4$ $x = 4, -5$