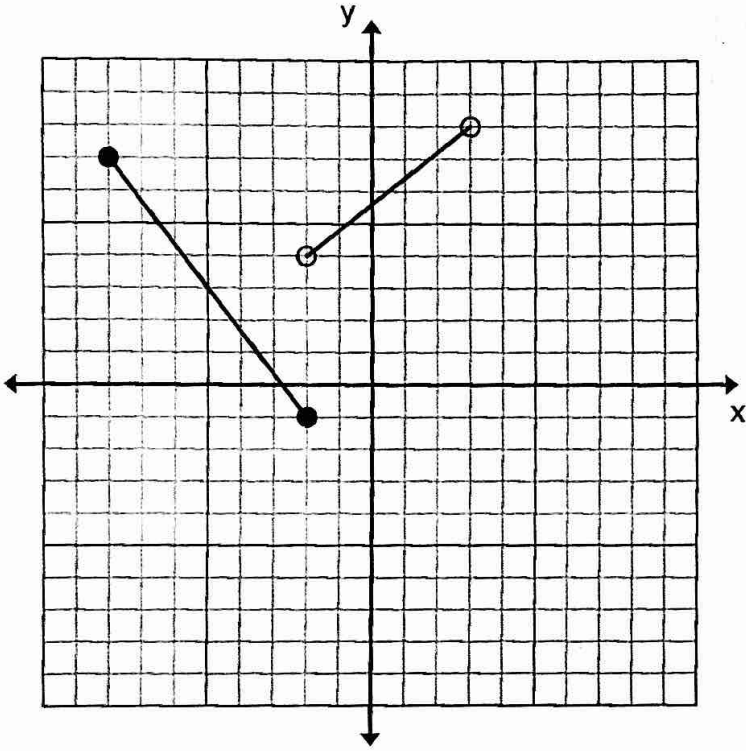


Algebra 2 Practice Quiz

1. Use the graph below to find the following part of the graph.



a. Domain: $[-8, 3)$

b. Range: $[-1, 8)$

c. Positive Interval: $[-8, -2.8) \cup (-2, 3)$

d. Negative Interval: $(-2.8, -2]$

e. Increasing Interval:
 $(-2, 3)$

f. Decreasing Interval:
 $(-8, -2)$

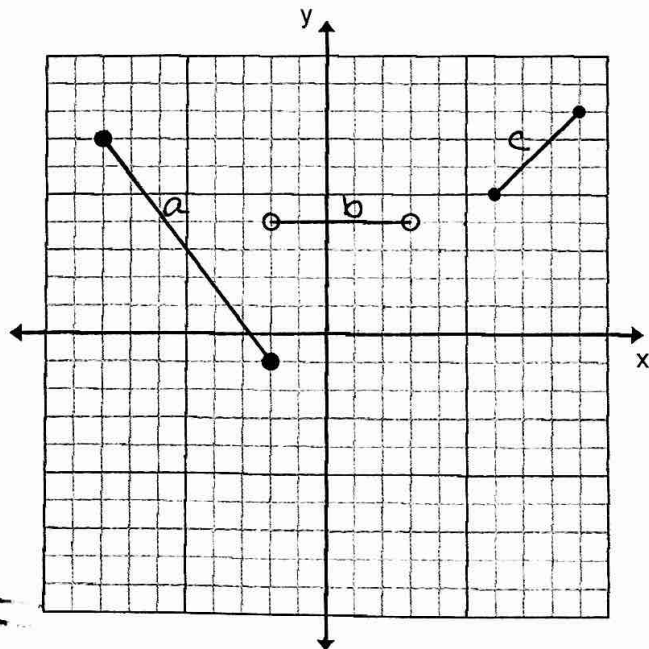
e. x-intercept(s):
 $(-2.8, 0)$

f. y-intercept(s):
 $(0, 5.5)$

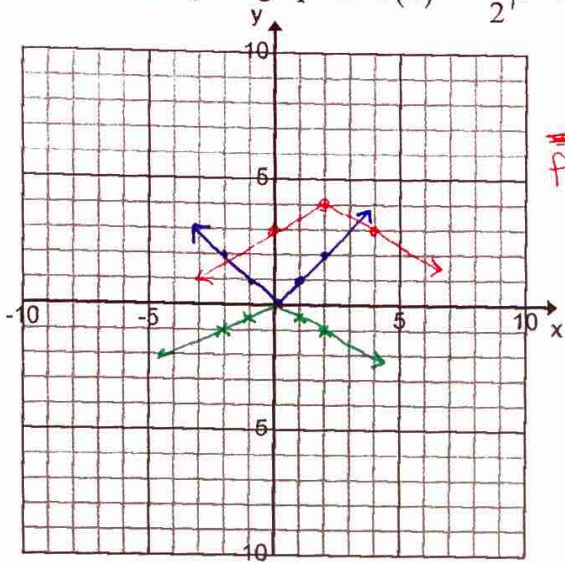
2. Write the rule that defines the graph.

$$\begin{aligned} a: y &= -\frac{4}{3}x + b \\ 7 &= -\frac{4}{3}(-8) + b \\ 7 &= \frac{32}{3} + b \\ -\frac{11}{3} &= b \\ y &= -\frac{4}{3}x - \frac{11}{3} \end{aligned}$$

$$f(x) = \begin{cases} -\frac{4}{3}x - \frac{11}{3} & -8 \leq x \leq -2 \\ 4 & -2 < x < 3 \\ x - 1 & 6 \leq x \leq 9 \end{cases}$$



3. Sketch a complete graph of $h(x) = -\frac{1}{2}|x-2| + 4$ and list the transformations.

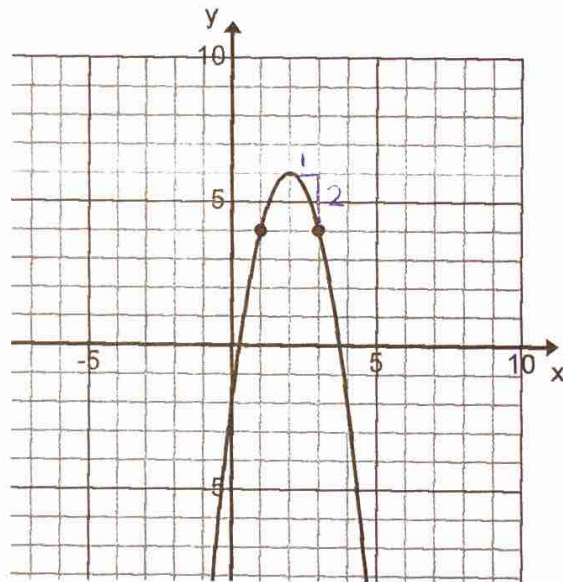


- Over x-axis
- ~~final~~ • VD by $\frac{1}{2}$
- R2
- U4

4. Find the equation of the graph.

1. PF: $y = x^2$
2. reflection: yes!
3. VD by 2
4. no HD
5. R2, U6

$$y = -2(x-2)^2 + 6$$



5. Graph the following function. $f(x) = \begin{cases} -x+1 & -5 \leq x < -3 \\ x & -3 \leq x \leq 0 \\ 4 & 0 < x < 4 \end{cases}$

