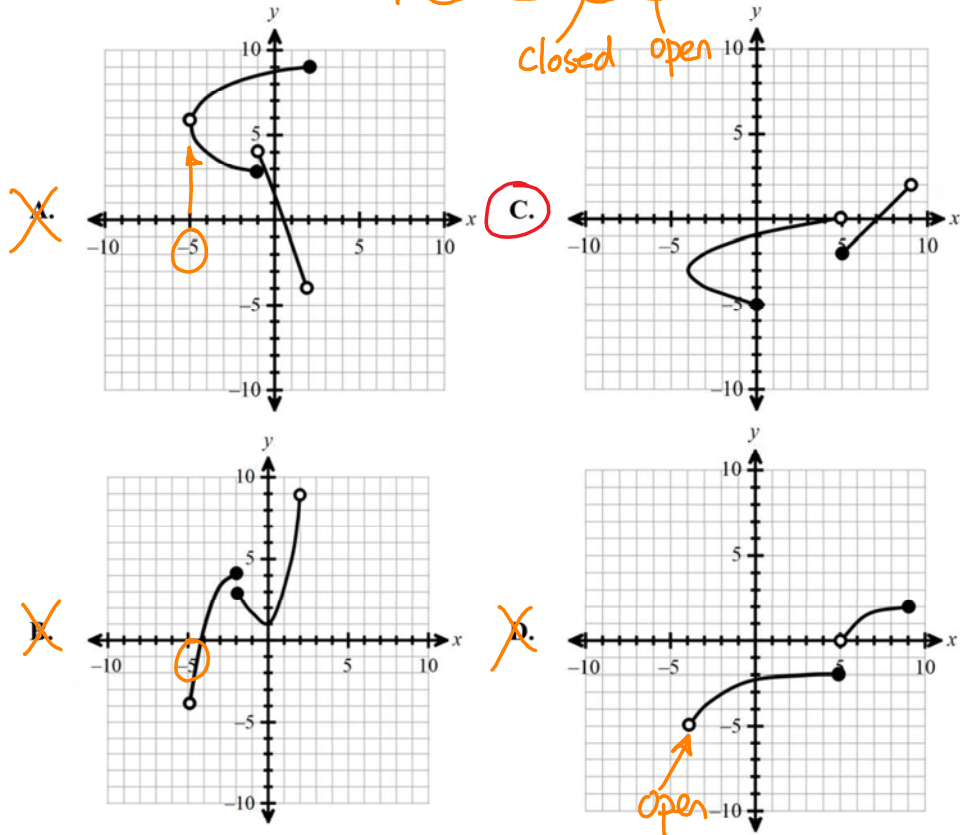
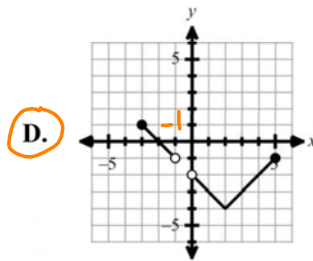
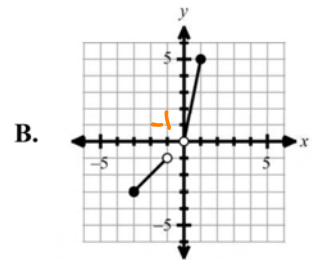
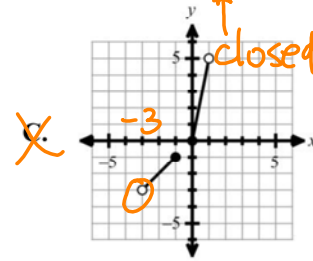
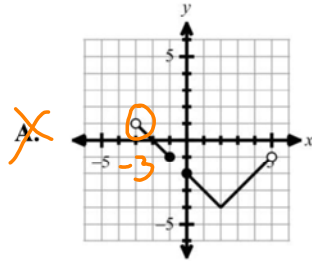


- C 1. Which of the graphs below has the domain: $\{x | -4 \leq x < 9\}$ and range: $\{y | -5 \leq y < 2\}$?

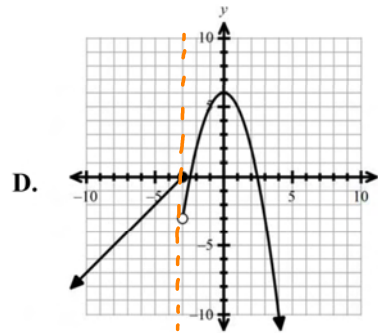
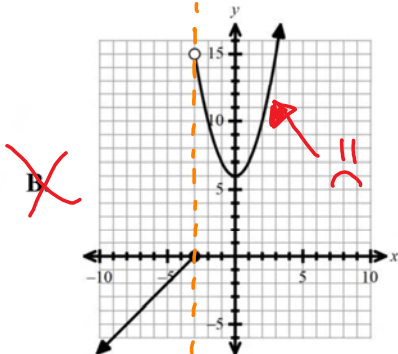
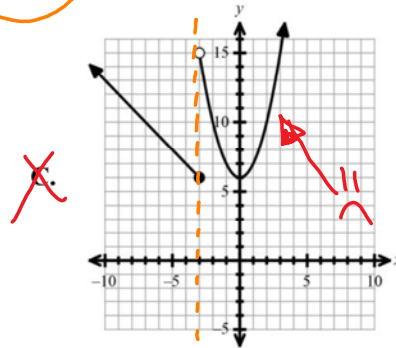
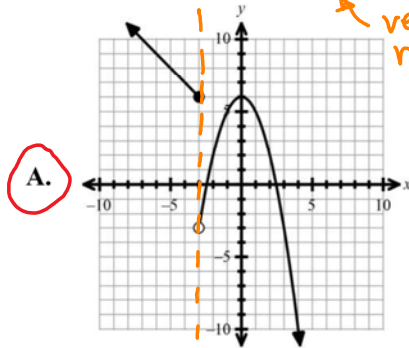


D 2. Which of the following graphs shows a function over the domain $[-3, -1) \cup (0, 5]$?



Union
closed
open

- A 3. Graph the function $f(x) = \begin{cases} -x + 3, & x \leq -3 \\ -x^2 + 6, & x > -3 \end{cases}$



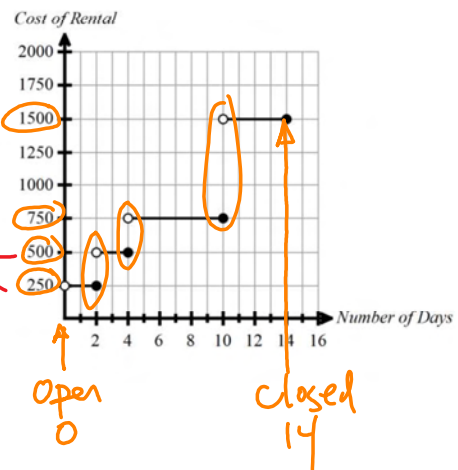
- C 4. The graph below shows the costs for renting a vacation home. What is the domain and range of the function?

X. $D: \{2, 4, 8, 10, 12, 14\}$
 $R: \{y | 0 \leq y \leq 1500\}$

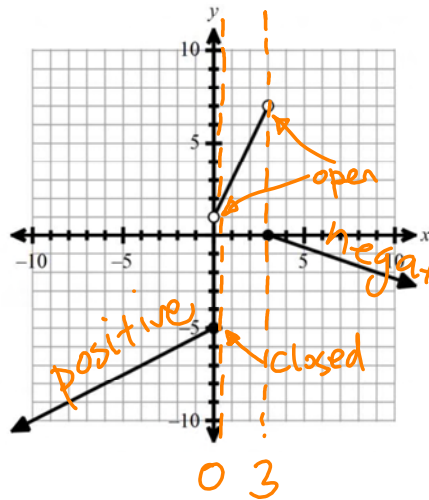
X. $D: \{2, 4, 8, 10, 12, 14\}$
 $R: \{250, 500, 750, 1500\}$

C. $D: \{x | 0 < x \leq 14\}$ ✓
 $R: \{250, 500, 750, 1500\}$

D. $D: \{x | 0 < x \leq 14\}$ ✓
 $R: \{y | 0 \leq y \leq 1500\}$



B 5. Write the piecewise function for the graph below:



A. $f(x) = \begin{cases} \frac{1}{2}x - 5, & x \leq 0 \\ -\frac{1}{3}x + 1, & 0 < x < 3 \\ 2x + 1, & x \geq 3 \end{cases}$

B. $f(x) = \begin{cases} \frac{1}{2}x - 5, & x \leq 0 \\ 2x + 1, & 0 < x < 3 \\ -\frac{1}{3}x + 1, & x \geq 3 \end{cases}$

C. $f(x) = \begin{cases} -\frac{1}{3}x + 1, & x \leq 0 \\ 2x + 1, & 0 < x < 3 \\ \frac{1}{2}x - 5, & x \geq 3 \end{cases}$

D. $f(x) = \begin{cases} \frac{1}{2}x - 5, & x \leq 0 \\ 2x + 1, & 0 \leq x \leq 3 \\ -\frac{1}{3}x + 1, & x \geq 3 \end{cases}$

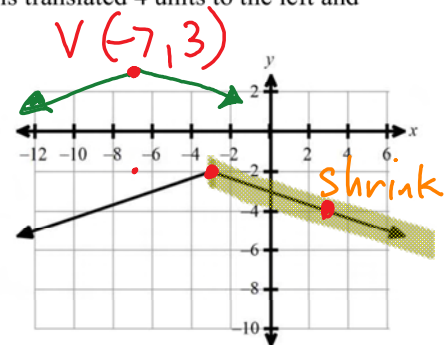
A 6. Which equation is obtained after the graph below is translated 4 units to the left and 5 units up?

A. $f(x) = -\frac{1}{3}|x + 7| + 3$

B. $f(x) = -\frac{1}{3}|x - 1| + 3$

C. $f(x) = -3|x + 7| + 3$

D. $f(x) = -3|x - 1| + 3$



$a|x - h| + k$
-7 3

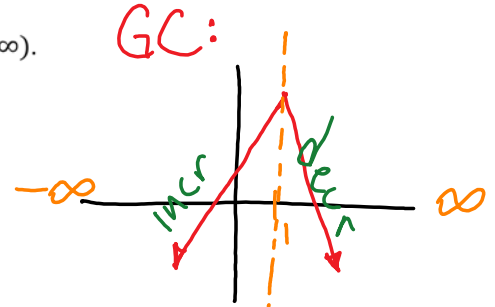
$a|x + 7| + 3$

Slope of abs value ...

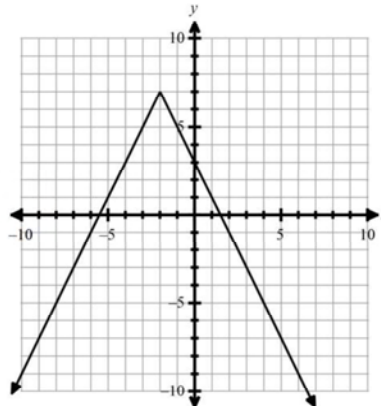
H, K

7. Which of the following statements are true for the function $f(x) = -2|x - 1| + 4$?
Select all that apply.

- F. $f(x)$ is decreasing on the intervals $(-\infty, 1)$ and $(3, \infty)$.
- G. $f(x)$ is decreasing on the interval $(-\infty, \infty)$.
- H. $f(x)$ is decreasing on the interval $(1, \infty)$.
- J. $f(x)$ is increasing on the interval $(-1, 3)$.
- K. $f(x)$ is increasing on the interval $(-\infty, 1)$.



8. The function, $f(x)$, is graphed below. Which of the following statements is correct?



- A. The average rate of change over the interval $[-7, 5]$ is the same as the interval $[0, 2]$.
- B. The average rate of change over the interval $[-6, -1]$ is greater than the interval $[-7, 0]$.
- C. The average rate of change over the interval $[-7, 0]$ is the same as the interval $[-6, 0]$.
- D. The average rate of change over the interval $[-6, -1]$ is greater than the interval $[-6, -2]$.

**Algebra 2 Honors Semester 1
Instructional Materials 2021-22 Answers**

Topic 1 Linear Functions & Systems			Topic 10 Matrices		
1.	C	HSF.IF.B.5	13.	D	HSN.VM.C.7(+)
2.	D	HSF.IF.B.5	14.	A	HSN.VM.C.8(+)
3.	A	HSF.IF.C.7b	15.	B	HSN.VM.C.12(+)
4.	C	HSF.IF.B.5	16.	-2	HSN.VM.C.8(+)
5.	B	HSF.LE.A.2 HSF.IF.C.7b	17.	D	HSN.VM.C.8(+)
6.	A	HSF.BF.B.3	18.	F, H, I, J	HSN.VM.C.9(+)
7.	K, H	HSF.IF.B.4	19.	C	HSN.VM.C.12(+)
8.	B	HSF.IF.B.6	20.	C	HSN.VM.C.10(+)
9.	A	HSA.REI.D.11	21.	-99	HSN.VM.10(+)
10.	B	HSA.REI.D.11	22.	A	HSN.VM.10(+)
11.	C	HSA.REI.C.6	23.	C	HSN.VM.10(+)
12.	122.75	HSA.REI.C.6	24.	C	HSN.VM.C.12(+)
			25.	D	HSA.REI.C.9
			26.	F, J	HSA.REI.C.9
			27.	B	HSA.REI.C.9

Algebra 2 Honors Semester 1 Instructional Materials 2021-22 Answers					
Topic 2 Quadratic Functions & Equations			Topic 3 Polynomial Functions		
28.	B	HSF.IF.B.4	49.	A	HSF.IF.B.4
29.	D	HSF.IF.B.4	50.	B	HSF.IF.B.4
30.	C	HSA.CED.A.2	51.	H, J	HSF.IF.B.4
31.	H, I, L, M	HSF.IF.B.4	52.	C	HSA.APR.A.1
32.	C	HSF.BF.B.3	53.	A	HSA.APR.A.1
33.	B	HSA.CED.A.2	54.	B	HSF.BF.A.1.b
34.	A	HSA.CED.A.2	55.	C	HSA.SSE.A.2 HSN.CN.C.8
35.	A	HSF.IF.B.4	56.	C	HSA.SSE.A.2
36.	D	HSA.CED.A.2	57.	A	HSA.APR.C.4
37.	B	HSN.CN.A.2	58.	15	HSA.APR.B.2
38.	D	HSN.CN.A.2	59.	D	HSA.APR.D.6
39.	D	HSN.CN.A.3(+)	60.	B	HSA.APR.B.2 HSF.IF.B.4
40.	B	HSA.SSE.A.3b	61.	C	HSA.APR.B.3 HSF.IF.C.7.c
41.	-14	HSA.REI.B.4a	62.	C	HSN.CN.C.7 HSA.APR.B.3
42.	C	HSA.REI.B.4b	63.	D	HSF.IF.C.7
43.	B	HSA.REI.B.4b HSN.CN.C.7	64.	B	HSN.CN.C.8(+) HSN.CN.C.9(+) HSA.APR.B.2 HSA.APR.B.3
44.	C	HSA.CED.A.2 HSN.CN.C.7	65.	A	HSN.CN.C.8(+) HSN.CN.C.9(+) HSA.APR.B.2 HSA.APR.B.3
45.	D	HSA.CED.A.2 HSA.REI.B.4	66.	C	HSN.CN.C.9(+)
46.	A	HSA.RE.IC.7	67.	D	HSF.BF.B.3
47.	52.5	HSA.REI.C.7 HSA.REI.D.11	68.	D	HSF.IF.B.4 HSF.BF.B.3
48.	B	HSA.REI.D.11 HSA.REI.D.12			

Released 7/30/21