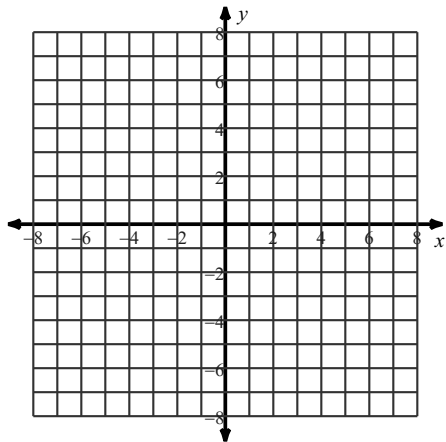


## Day 1 HOMEWORK - Transformations

Graph each equation. Then give the A) domain B) range C) interval that the graph is increasing and decreasing, and D) critical point.

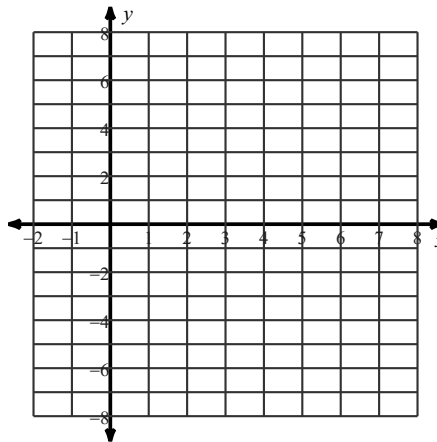
1)  $f(x) = |x + 1| + 3$

- A.
- B.
- C.
- D.



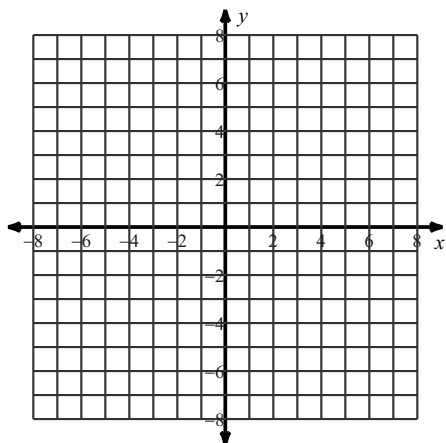
2)  $f(x) = -|x - 4| + 2$

- A.
- B.
- C.
- D.



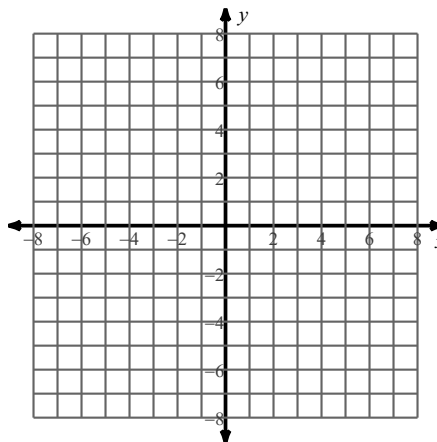
3)  $f(x) = 2|x| - 3$

- A.
- B.
- C.
- D.



4)  $f(x) = -\frac{1}{3}|x - 2|$

- A.
- B.
- C.
- D.



**Without knowing the parent function, describe what each transformation would do to any parent function in words.**

5)  $f(x)$

6)  $f(x+6)$

7)  $-f(x)-5$

8)  $f(x-3)+10$

9)  $0.62f(x+2)$

10)  $5f(x)-1$

11)  $-0.25f(x-3)$

12)  $f(x-3)-3$

**Without graphing, write the function notation of each transformation below from the parent function,  $f(x)$ .**

13)  $h(x)=|x-4|-2$

14)  $g(x)=|x-3|$

15)  $m(x)=2|x+4|-5$

16)  $b(x)=-3|x+1|+3$

17)  $d(x)=\frac{1}{2}(x+2)^2-2$

18)  $c(x)=-(x+3)^2+1$

19)  $g(x)=2(x+3)^2+1$

20)  $h(x)=-(x+1)^2-3$

**Add or subtract the following. Write your answer as a decimal AND a percent!**

21)  $1-2\%$

22)  $1+2\%$

23)  $1+25\%$

24)  $1-25\%$

25)  $2+250\%$

26)  $1-63\%$

**Evaluate the following problems.**

27)  $\frac{\frac{1}{3}}{\frac{2}{1}}$

28)  $\frac{1}{4} \cdot \frac{5}{2}$

29)  $\frac{\frac{1}{4}}{\frac{5}{2}}$

30)  $\frac{1}{3} \cdot 2$