

Ch.2 Review
Math 80

1) Use the graph of $f(x)$ to find each:

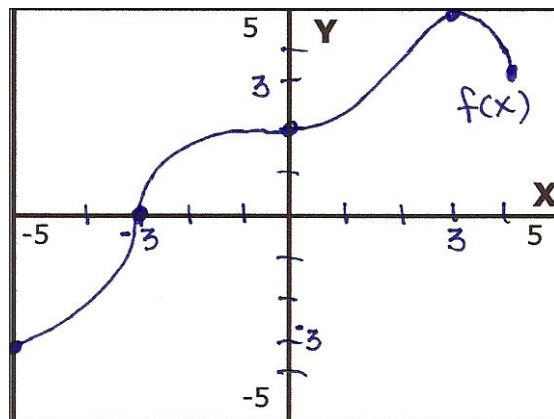
a) Domain

b) Find $f(-3)$

c) Find $f(0)$

d) Y-intercept

e) For what number(s) is $f(x) = 5$

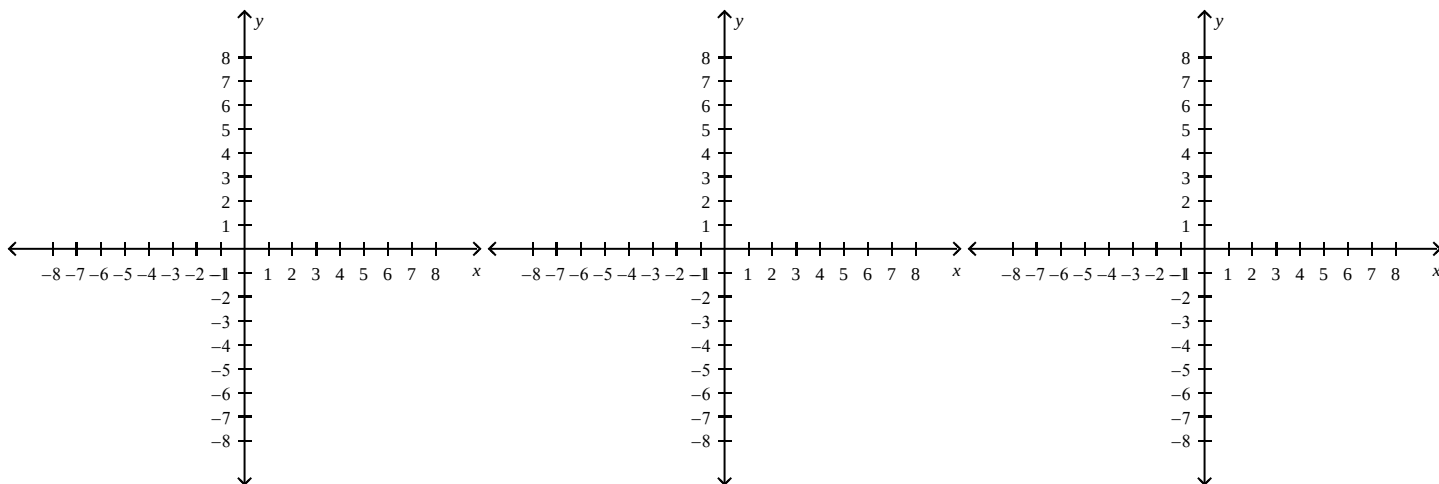


2) Graph each by point plotting:

a) $y = \frac{1}{3}x - 2$

b) $y = |x| + 2$

c) $y = x^3 - 4$



3) Determine which are functions?

a) $\{ (-6, 3), (-1, 3), (-4, -3), (2, -4) \}$

b) $\{ (6, -5), (6, 3), (3, -1), (3, -4) \}$

c) $y = |x| + 2$

4) Given $f(x) = 2x - 3$ and $g(x) = x^2 - 1$ find each:

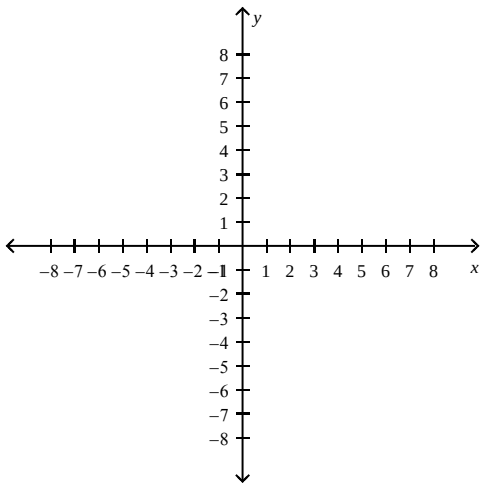
a) $f(3)$

b) $g(-2)$

c) $f(3a)$

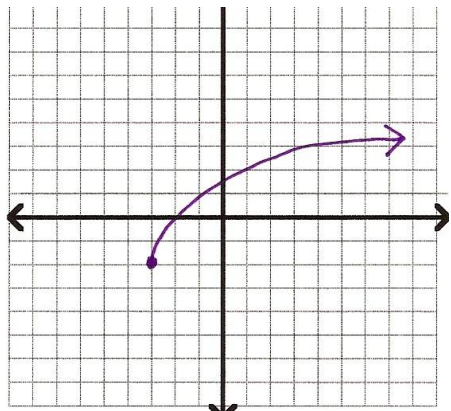
d) $g(3)$

5) Graph the function $f(x) = \frac{1}{2}x^2$

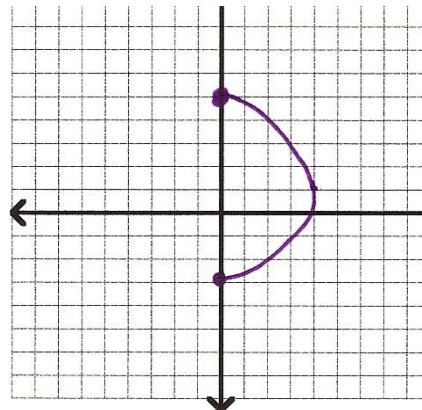


State whether each is a function, and then state the domain and range of each:

6)



7)



Solve the compound inequality, graph the solution set, and write the solution in interval notation.

8) $\frac{x-2}{-3} \leq 2$ and $\frac{x-2}{-3} \geq -2$

9) $5x+1 \leq -4$ or $5x+1 > 4$

10) Solve the absolute value equation: $|5x-2|+3=7$

11) Solve the absolute value inequality: $|x+5|-3 \leq 7$

Answers:

1a) $[-5, 4]$

1b) $f(-3) = 0$

1c) $f(0) = 2$

1d) $(0, 2)$

1e) $x = 3$

2) a) line b) “V” shape c) “S” shape

3a) yes function 3b) Not function 3c) yes function

4a) 3

4b) 3

4c) $6a-3$

4d) 8

5) “U” shape facing up 6) yes a function, Domain $[-3, \infty)$ Range $[-2, \infty)$

7) not a function, Domain $[0, 4]$ and Range $[-3, 5]$

8) $[-4, 8]$

9) $(-\infty, -1]$ or $(3/5, \infty)$

10) $6/5, -2/5$

11) $[-15, 5]$