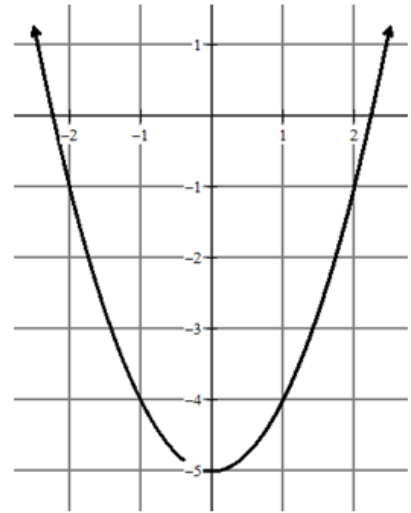


Practice Problems 2.1

1) Domain: All Real #s

2) Range: $y \geq -5$



3) Find $f(\frac{1}{2})$ -4

4) Find $f(0)$ -5

5) Find x , when $f(x) = -1$
-2 or 2

6) Is the relation a function? Why or why not? Yes - passes the VLT

7) Is it a linear function? NO

8) Domain: $-3 < x \leq 3$

9) Range: $0 \leq y < 2$

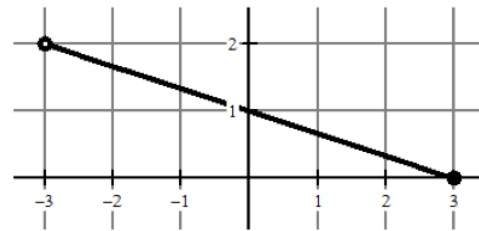
10) Find $f(0)$ 1

11) Find $f(-3)$ DOES NOT EXIST

12) Find x , when $f(x) = 1$ 0

13) Is the relation a function? Why or why not? Yes, passes VLT

14) Is it a linear function? Yes



15) Domain: All Real #s

16) Range: ALL REAL #s

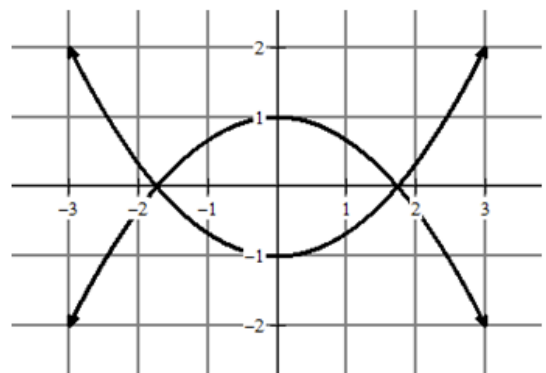
17) Find $f(-3)$ 2 or -2

18) Find $f(0)$ 1 or -1

19) Find x , when $f(x) = -2$ 3 or -3

20) Is the relation a function? Why or why not? NO, AT $x=0$ there are 2 outputs,

21) Is it a linear function? NO



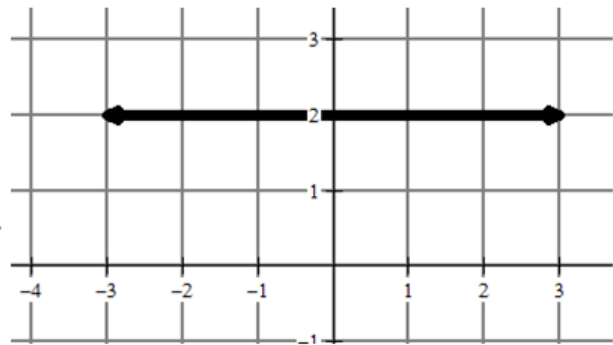
22) Domain: All Real #'s 23) Range: $y = 2$

24) Find $f(-3)$ 2 25) Find $f(0)$ 2

26) Find x , when $f(x) = -2$ Does not exist.

27) Is the relation a function? Why or why not? Yes, passes VLT

28) Is it a linear function? Yes



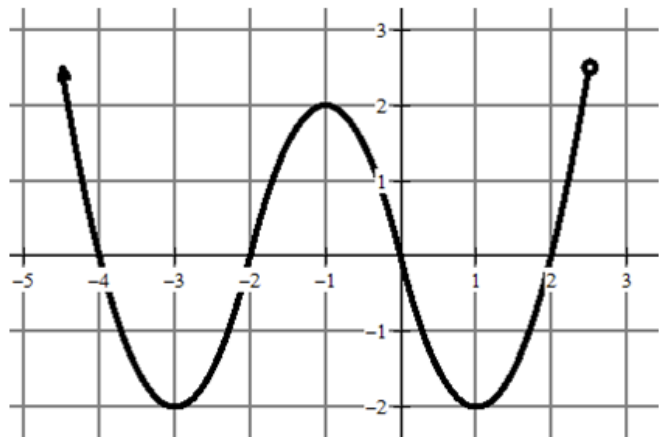
29) Domain: $x < 2.5$ 30) Range: $y \geq -2$

31) Find $f(-3)$ -2 32) Find $f(0)$ 0

33) Find x , when $f(x) = -2$ -3 or 1

34) Is the relation a function? Why or why not? Yes, passes VLT.

35) Is it a linear function? No.



Directions: Find $f(x)$ or x for each given situation.

36) $f(x) = 3x - 8$; find x when $f(x)$ is 13

$$\begin{array}{r} 13 = 3x - 8 \\ 18 \qquad \qquad +8 \\ \hline 21 = 3x \\ \frac{21}{3} = \frac{3x}{3} \end{array}$$

$$\boxed{x = 7}$$

37) $f(x) = |x + 4| - 8$; find $f(-9)$

$$\begin{aligned} f(-9) &= |-9 + 4| - 8 \\ &= |-5| - 8 \\ &= 5 - 8 \\ &= -3 \end{aligned}$$
$$\boxed{f(-9) = -3}$$

38) $f(x) = -2x^2 - 4$; find $f(-2)$

$$\begin{aligned} f(-2) &= -2(-2)^2 - 4 \\ f(-2) &= -2(4) - 4 \\ f(-2) &= -8 - 4 \\ &= -12 \end{aligned}$$
$$\boxed{f(-2) = -12}$$

39) $f(x) = 5x - 3$; find x when $f(x) = 32$

$$\begin{array}{r} 32 = 5x - 3 \\ 13 \qquad \qquad +3 \\ \hline 35 = 5x \\ \frac{35}{5} = \frac{5x}{5} \\ 7 = x \end{array}$$
$$\boxed{7 = x}$$