

# HW2

1. rational

2. irrational #s

11. a)  $\mathbb{N}$ : 1, 2, 5

b)  $\mathbb{Q}$ : 1, 2, 5

c)  $\mathbb{Z}$ : -11, -9, -4, 0, 1, 2, 5

d)  $\mathbb{R}$ : -11, -9, -4,  $-\frac{7}{2}$ , 0,  $\frac{2}{3}$ , 1, 2, 5

e)  $\sqrt{2}$

13. a) 1

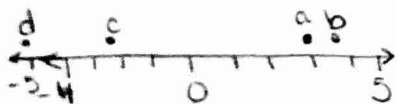
b) 1

c) -13, -6, 1

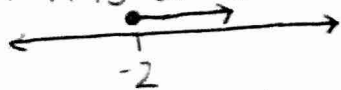
d) 2.01,  $0.\overline{6}$ , -13, 1, -6

e) 0.01011...

17.

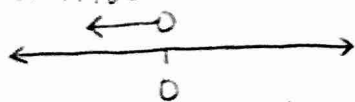


32.  $x$  is at least -2



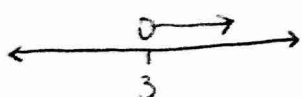
unbounded

33.  $x$  must be less than 0



unbounded

34.  $x$  is more than 3



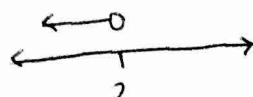
unbounded

35.  $x$  is at least 4



unbounded

36.  $x$  is less than 2



unbounded

37.  $x$  is between -2 : 2



bounded

43.  $y \geq 0$ ,  $[0, \infty)$

44.  $y \leq 25$   $(-\infty, 25]$

45.  $-2 < x \leq 4$   $(-2, 4]$

46.  $-6 \leq y < 0$   $[-6, 0)$

47.  $10 \leq t \leq 22$   $[10, 22]$

125. True

126. False