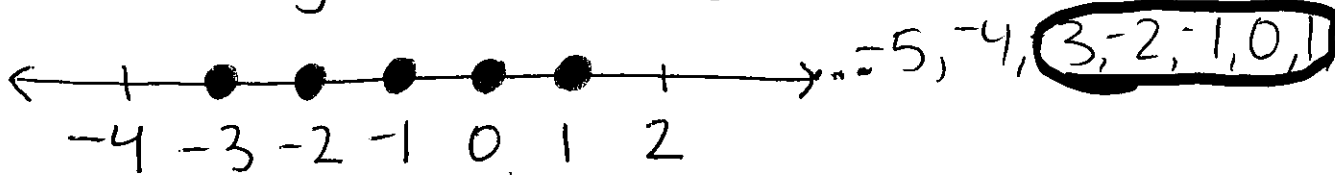


Examples:

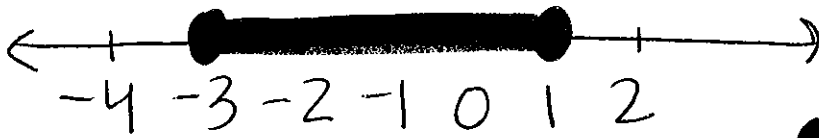
Day 5

Graph each set of numbers.

a) set of integers from -3 to 1 <sup>No shading</sup>

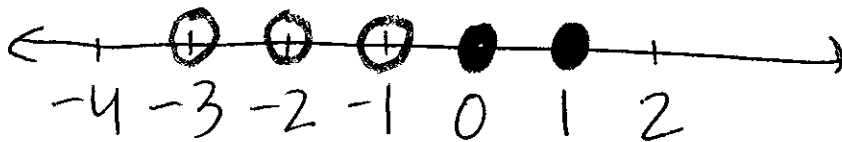


b) set of real numbers from -3 to 1 always



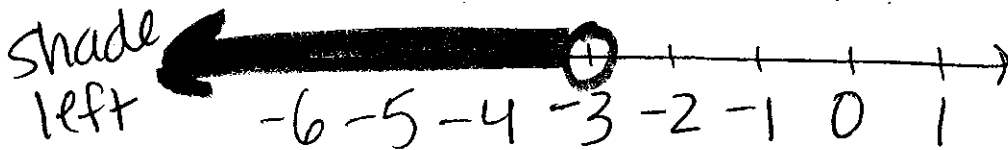
$\mathbb{R}$ : shade  
○ open circle doesn't include pts  
● closed circle (included)

c) set of whole numbers from -3 to 1



$\mathbb{W}$ : 0, 1, 2, 3, ...  
no shading

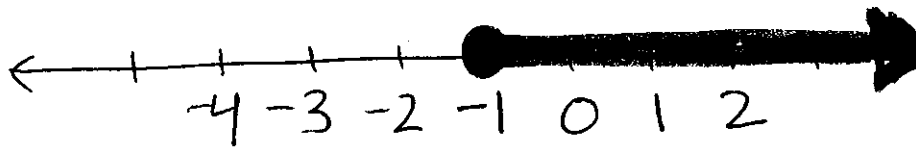
d) { all  $\mathbb{R}$ 's less than -3 }  $\mathbb{R} < -3$



Shade left

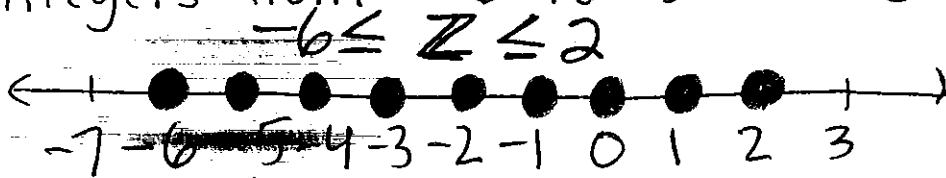
$< >$  ○  
open circle

e) { all  $\mathbb{R}$ 's greater than or equal to -1 }  
Shade right



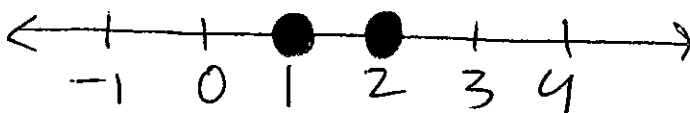
$\mathbb{R} \geq -1$   
 $\leq \geq$   
closed circle

f) integers from -6 to 2 inclusive



$-6 \leq \mathbb{Z} \leq 2$   
closed circles  
no shading

g) Natural numbers less than 3



$\mathbb{N} < 3$   
1, 2, 3, 4, 5, ...

Define each set using roster notation. (Means list the items)

(ex 1) even #'s greater than 8

$$\{8, 10, 12, 14, 16, \dots\}$$

(ex 2) odd #'s with a value less than -2  
... ~~(-7)~~, -6, ~~(-5)~~, -4, ~~(-3)~~, -2, -1, 0, ...

$$\{\dots -7, -5, -3\}$$

(ex 3) days have 36 hours

$\emptyset$  or  $\{\}$  empty set

None exist

(ex 4) odd Natural #'s less than 11

$$\{1, 3, 5, 7, 9\}$$

(ex 5) Integers greater than -12

$$\{-11, -10, -9, -8, \dots\}$$

(ex 6)  $\{x \mid x \text{ is a positive integer and } x < 10\}$

answer:  $\{1, 2, 3, 4, 5, 6, 7, 8, 9\}$

---

(ex 7)  $-3 \in \{x \mid x \text{ is a natural number}\}$

**T or F** This is a false statement.  
Natural #'s aren't negative.