

ASSIGNMENT 1.1 p7 #2, 3-15, 16, 17, 19-29, 30, 33, 35, 37, 38, 39, 41, 42

#2. THE SET OF ALL INTEGERS... DOES NOT BELONG SINCE THE OTHER 3 SETS INCLUDE ALL REAL NUMBERS NOT JUST THE INTEGERS.

#3.  $\{0, 1, 2, 3, 4, 5, 6, 7, 8, 9\}$

#5.  $\{51, 52, 53, \dots\}$

#7.  $(3, 9)$

#9.  $[-13, \infty)$

#11.  $(-4, 6)$

#13.  $(-\infty, 3)$

#15.  $[-10, 10]$  ~~THROUGH~~

#16.  $(110, 220)$  ~~THROUGH~~



#21.  $\{x \mid -5 \leq x < 16\}$

#23.  $\{x \mid x \leq -4 \text{ OR } x \geq 4\}$

#25.  $\{x \mid x \in \mathbb{Z} \text{ AND } x < -20\}$

$\uparrow$  x IS A WHOLE NUMBER OR THE INTEGER SET

#27.  $\{x \mid x \neq 100\}$

#29. THE INTERVAL NOTATION  $(-\infty, -8]$   
INCLUDES  $-8$  WHILE THE  
SET BUILDER NOTATION  $\{x \mid x < -8\}$   
DOES NOT. IT SHOULD BE:  
 $\{x \mid x \leq -8\}$

#30. THE SET BUILDER NOTATION  
SHOULD LOOK LIKE:

$$\{x \mid -7 \leq x < 4\}$$

#33. YES, INTERVAL NOTATION INCLUDES  
ALL REAL NUMBERS SO YOU  
CAN'T JUST HAVE A SET OF  
WHOLE NUMBERS

#35. a.  $\{0, 2, 4, 6, \dots\}$

- CANNOT REPRESENT IT IN  
INTERVAL NOTATION SINCE  
IT IS SPECIFIC TO WHOLE  
NUMBERS.

-  $\{x \mid x \in \mathbb{W} \text{ AND } x \text{ IS EVEN}\}$

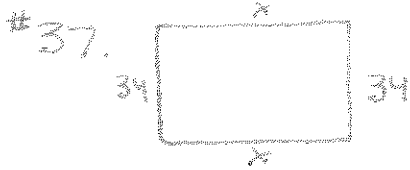
b. - CANNOT REPRESENT IT AS A LIST  
SINCE IT IS ALL REAL NUMBERS WHICH  
IS INFINITE.

-  $(-\infty, -4)$   
-  $\{x \mid x < -4\}$

c. - CANNOT REPRESENT IT AS A LIST  
SINCE IT IS ALL REAL NUMBERS WHICH  
IS INFINITE.

-  $(-\infty, 40]$  or  $[60, \infty)$   
-  $\{x \mid x \leq 40 \text{ OR } x \geq 60\}$

#36. THE SET OF NATURAL NUMBERS IS A  
SUBSET OF WHOLE NUMBERS SO...  
IF YOU ADD 1 TO EACH ELEMENT  
OF THE SET OF WHOLE NUMBERS  
YOU GET THE SET OF NATURAL NUMBERS.



$$140 \leq (34 + 34 + x + x) \leq 260$$

$$140 \leq 2x + 68 \leq 260$$

$$72 \leq 2x \leq 192$$

$$36 \leq x \leq 96$$

INTERVAL NOTATION:

$$[36, 96]$$

#38.  $760 \leq 16x \leq 1000$

$$47.5 \leq x \leq 62.5$$

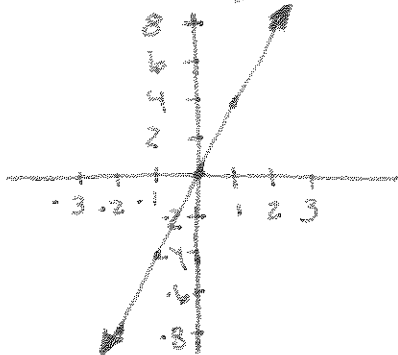
INTERVAL NOTATION:

$$[47.5, 62.5]$$

#39.

$x$	-2	-1	0	1	2
$f(x)$	-8	-4	0	4	8

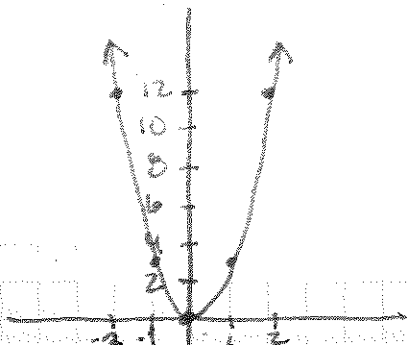
$f(x) = 4x$   
 ← this is your y values



#41.  $f(x) = 3x^2$

$x$	-2	-1	0	1	2
$f(x)$	12	3	0	3	12

← this is your y



#42.  $f(x) = 2x^2 - 3$

