

BE-1A

TUESDAY 9-25-07

① NAME THE PROPERTY:

Ⓐ $4(6) = 6(4)$

Ⓑ $4(5 \cdot 6) = (4 \cdot 5)6$

Ⓒ $8 \cdot 1 = 8$

Ⓓ $-\frac{2}{3} \cdot -\frac{3}{2} = 1$

② Simplify: $5(2x + y) - 4x + 2y$

③ SKETCH A graph of height vs. time for a basketball that is used to make a free throw. (no numbers)

SETS OF numbers:

$$\{1, 2, 3, \dots\}$$

NATURAL Numbers

"CAVE person" numbers in NATURE
1 rock, 2 rocks, ...

$$\{0, 1, 2, 3, \dots\}$$

WHOLE NUMBERS

$\uparrow$
ADD zero TO THE NATURALs, GET IT?

$$\{\dots, -3, -2, -1, 0, 1, 2, 3, \dots\}$$

←
NEGATIVE
INTEGERS

→
POSITIVE
INTEGERS = NATURALs

INTEGERS

RATIO ANOTHER NAME for a
fraction $\Rightarrow$ 2 numbers
that are divided

$$\left\{ \frac{a}{b} \text{ where } a, b \text{ are integers} \right. \\ \left. \text{and } b \neq 0 \right\}$$

RATIONAL NUMBERS

Why can b
NOT be zero?

"RATIO" numbers
"fraction" numbers.

Since a fraction will always
be EITHER A terminating or repeating
decimal — you could ALSO write this set
as: $\{ \text{terminating AND repeating decimals} \}$

Name All the sets to which

each number belongs:

($N = \text{NATURAL}$, $W = \text{WHOLE}$, $I = \text{integers}$,
 $R = \text{rational}$)

5

N, W, I, R

-6

I, R

$\frac{1}{2}$

R

0.3

R

$0.\overline{3}$

R

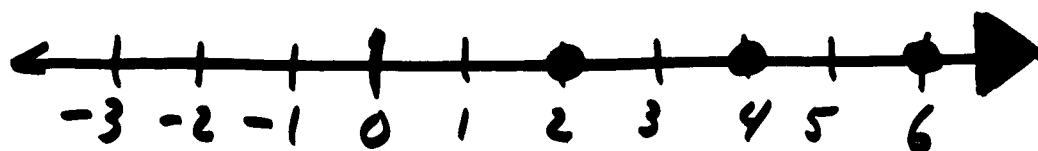
0

W, I, R

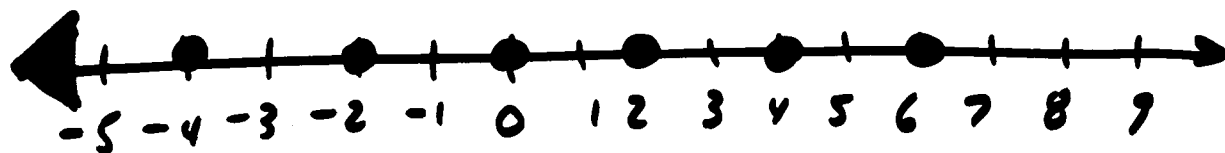
LET'S GRAPH some numbers using just the X-axis (also called a number line).

Use a heavy arrow to show ...
(the pattern continues)

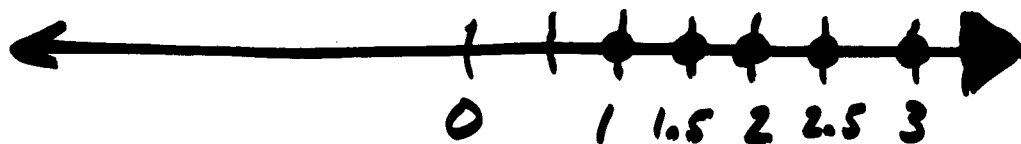
ex) graph $\{2, 4, 6, \dots\}$



{Ex 2
pg. 69} (a) Graph $\{\dots, -4, -2, 0, 2, 4, 6\}$



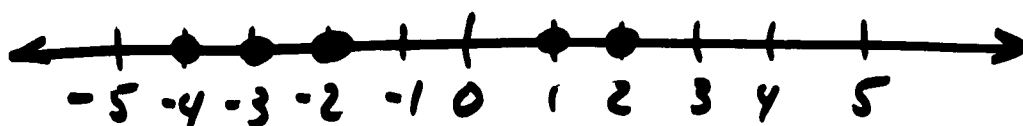
Name (write) the set:



Ex 1
Pg 69

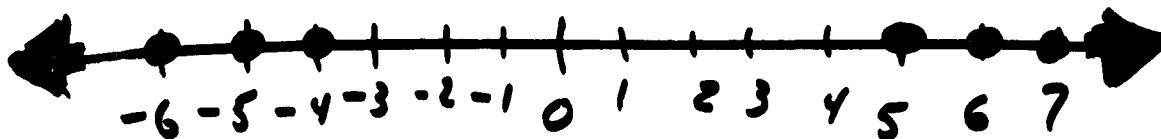
$$\{1, 1.5, 2, 2.5, 3, \dots\}$$

⑥ Name the set

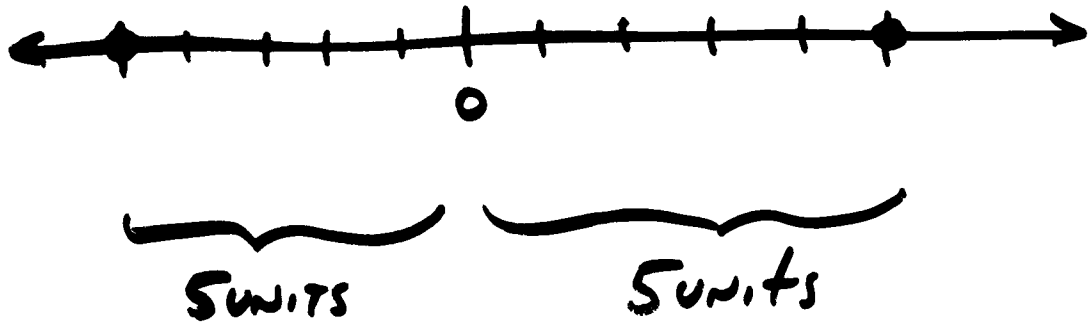


$$\{-4, -3, -2, 1, 2\}$$

GRAPH: $\{\text{integers} < -3 \text{ or } \geq 5\}$



6.
LOOK AT THE graph, how far is EACH
point from zero?



ABSOLUTE
VALUE

distance from zero

symbol $|x|$

EX) $|5| = 5$
 $|-5| = 5$
 $|\frac{1}{2}| = \frac{1}{2}$
 $|\frac{1}{2}| = \frac{1}{2}$

↑
ALSO A
GROUPING
SYMBOL

The ABSOLUTE VALUE is ALWAYS POSITIVE.

Homework:

- ① Read Ch. 2-1
- ② Memorize definition of "4 sets"
- ③ Pg 70 #1, 2, 4 to 7, 10 to 13.
- ④ Bring in Paper Airplane project.