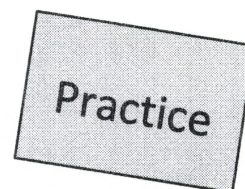Name:_____   Block:___

Quiz: Review.
Chapters 1 and 2

Group A.

Practice

There are 5 questions in this quiz, each of equal value.
Standard time for the test is 15 minutes .
No calculator is allowed. (accommodation excepted)

Question 1:

Simplify.

$$2x - \{4[(3-x)-(x-2)]-2x\}$$

$$2x-\left\{4\left[\underbrace{3-x-x+2}_{5-2x}\right]-2x\right\}$$

$$=2x-\{20-8x-2x\}=2x-\{20-10x\}=$$

$$=2x-20+10x=\boxed{12x-20}$$

Question 2:

Solve for y.

$$8-4y = 3(2-y)$$

$$8-4y=6-3y$$

$$\boxed{2=y}$$

check: $8-4\cdot2 \overset{?}{=} 3(2-2)$

$0 \overset{?}{=} 0$ ✓

Question 3:

Solve for x.
Present your solution in graphic way (number line) and in set notation (" $x \in$ ")

$$4(2 - x) < 12 \quad \text{and} \quad 4(2 + x) \leq 12$$

$$2 - x < 3 \qquad\qquad 2 + x \leq 3$$

$$-1 < x \quad \underline{and} \qquad x \leq 1$$

$$x \in (-1, 1]$$

Question 4:

Solve for x.

$$8 - 2|x - 3| \leq 4$$

Present your solution in graphic way.
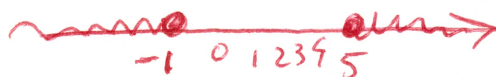
$$-2|x - 3| \leq -4$$

$$|x - 3| \geq 2$$

$$x - 3 \geq 2 \qquad or \qquad -(x - 3) \geq 2$$

$$x \geq 5 \qquad or \qquad x + 3 \leq 2$$

$$x \leq -1$$

$$\boxed{x \leq -1 \ or \ x \geq 5}$$

Question 5:

Choose any number. Double it. Subtract six and add the original number. Now divide by three. Repeat this process with other numbers, until a pattern develops. By using a variable such as x in place of your number, show that the pattern does not depend on which number you choose initially.

$$\underline{3} \rightarrow 3 \times 2 = 6 \rightarrow 6 - 6 + 3 = 3 \rightarrow \frac{3}{3} = \underline{1}$$

$$\underline{4} \rightarrow 4 \times 2 = 8 \rightarrow 8 - 6 + 4 = 6 \rightarrow \frac{6}{3} = \underline{2}$$

$$\boxed{X} \rightarrow 2 \times X \rightarrow 2 \cdot X - 6 + X = 3X - 6 \rightarrow (3X - 6) \cdot \frac{1}{3} = \boxed{X - 2}$$

=== End ====