Do #1 to 4

1

Which of the following is a solution to the inequality $-x - 4 > 4x - 14$?

A) -1 $+x$ $+x$

B) 2

$-4 > 5x - 14$

C) 5

D) 8

$$\frac{10}{5} > \frac{5x}{5}$$

$$2 > x$$

2

If $\frac{3}{4}x - 4 > \frac{1}{2}x - 10$, which of the following must be true?

A) $x < 24$
B) $x > 24$
C) $x < -24$
D) $x > -24$

$$\frac{3}{4}X - 4 > \frac{1}{2}X - 10$$
$$-\frac{1}{2}X \qquad -\frac{1}{2}X$$
$$\overline{\frac{1}{4}X - 4 > \qquad -10}$$
$$+4 \qquad +4$$
$$\overline{4\left(\frac{1}{4}X\right) > (-6)\, 4}$$
$$X > -24$$

NORMAL FLOAT AUTO REAL RADIAN MP

Plot1 Plot2 Plot3

$\blacksquare\backslash Y_1 \boxminus \left(\frac{3}{4}X-4\right) > \left(\frac{1}{2}X-10\right)\blacksquare$

$\blacksquare\backslash Y_2=$
$\blacksquare\backslash Y_3=$
$\blacksquare\backslash Y_4=$
$\blacksquare\backslash Y_5=$
$\blacksquare\backslash Y_6=$
$\blacksquare\backslash Y_7=$

NORMAL FLOAT AUTO REAL RADIAN MP
PRESS + FOR △Tbl

X	Y
-25	0
-24	0
-23	1
-22	1
-21	1
-20	1
-19	1
-18	1
-17	1
-16	1
-15	1

X= -25

$y = X \qquad y > X$
$y = 3 \rightarrow y < 3$

Which of the following systems of inequalities could be the one graphed in the xy-plane above?

A) $y > 3$
   $y > x$

B) $y < 3$
   $y < x$

C) $y < 3$
   $y > x$

D) $y > 3$
   $y < x$
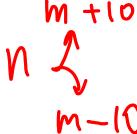
NORMAL FLOAT AUTO REAL RADIAN MP

4

Jerry estimates that there are m marbles in a jar. Harry, who knows the actual number of marbles in the jar, notes that the actual number, n, is within 10 marbles (inclusive) of Jerry's estimate. Which of the following inequalities represents the relationship between Jerry's estimate and the actual number of marbles in the jar?

A) $n + 10 \leq m \leq n - 10$

B) $m - 10 \leq n \leq m + 10$

C) $n \leq m \leq 10n$

D) $\dfrac{m}{10} \leq n \leq 10m$

(handwritten annotations: $m + 10$, n, $m - 10$)

5

A manufacturer produces chairs for a retail store according to the formula, $M = 12P + 100$, where M is the number of units produced and P is the retail price of each chair. The number of units sold by the retail store is given by $N = -3P + 970$, where N is the number of units sold and P is the retail price of each chair. What are all the values of P for which the number of units produced is greater than or equal to the number of units sold?

A) $P \geq 58$

B) $P \leq 58$

C) $P \geq 55$

D) $P \leq 55$