

BE-1A WEDNESDAY 4-4-07

- ① STATE THE GRI.
- ② Suppose you found the solution to $-3t + 6 \leq -3$ was $t \geq 3$
How do you check this?
WHAT VALUES of t would you pick?
- ③ Name the set:
 $\{0, 1, 2, 3, \dots\}$

* TAKE OUT HOMEWORK *

Pg 335 # 4 to 8

Pg 335

$$\textcircled{4} \quad \begin{array}{rcl} -4y - 23 & < & 19 \\ & +23 & +23 \end{array}$$

$$\begin{array}{rcl} -4y & < & 42 \\ \hline -4 & & -4 \end{array}$$

Flip!

$$y > -\frac{21}{2}$$

or

$$y > -10\frac{1}{2}$$

Checks

y LESS THAN $-10\frac{1}{2}$	$y = -\frac{21}{2}$	$y > -10\frac{1}{2}$
PICK: $y = -12$		
$-4(-12) - 23 \stackrel{?}{<} 19$	$-4(-\frac{21}{2}) - 23 \stackrel{?}{<} 19$	$y = 0$ PICK
$48 - 23 \stackrel{?}{<} 19$	$-2(-\frac{21}{1}) - 23 \stackrel{?}{<} 19$	$-4(0) - 23 \stackrel{?}{<} 19$
$25 \stackrel{?}{<} 19$	$42 - 23 \stackrel{?}{<} 19$	$-23 \stackrel{?}{<} 19$
NO	$19 \stackrel{?}{<} 19$	YES
✓	NO	✓
	✓	

Pg 335

#5

$$\frac{2}{3}r + 9 \geq -3$$

$$\quad \quad -9 \quad \quad -9$$

$$\frac{2}{3}r \geq -12$$

$$\frac{3}{2} \cdot \frac{2}{3}r \geq -12 \cdot \frac{3}{2}$$

$$\boxed{r \geq -18}$$

CHECKS

Pick r less
than -18

$$r = -21$$

$$\frac{2}{3}(-21) + 9 \stackrel{?}{\geq} -3$$

$$-14 + 9 \stackrel{?}{\geq} -3$$

$$-5 \stackrel{?}{\geq} -3$$

NO

✓

PICK

$$r = -18$$

$$\frac{2}{3}(-18) + 9 \stackrel{?}{\geq} -3$$

$$-12 + 9 \stackrel{?}{\geq} -3$$

$$-3 \stackrel{?}{\geq} -3$$

YES

✓

Pick r greater
than -18

$$r = 0$$

$$\frac{2}{3}(0) + 9 \stackrel{?}{\geq} -3$$

$$9 \stackrel{?}{\geq} -3$$

yes

✓

Pg 335

(#6) $7b + 11 > 9b - 13$
 $-7b \quad -7b$

$11 > 2b - 13$
 $+13 \quad +13$

$\frac{24}{2} > \frac{2b}{2}$

$12 > b$

$b < 12$

CHECKS

Pick b less than 12	Pick $b = 12$	Pick b greater than 12
$b = 0$	$b = 12$	$b = 20$
$7(0) + 11 \stackrel{?}{>} 9(0) - 13$	$7(12) + 11 \stackrel{?}{>} 9(12) - 13$	$7(20) + 11 \stackrel{?}{>} 9(20) - 13$
$11 \stackrel{?}{>} -13$	$84 + 11 \stackrel{?}{>} 108 - 13$	$140 + 11 \stackrel{?}{>} 180 - 13$
YES	$95 \stackrel{?}{>} 95$	$151 \stackrel{?}{>} 167$
✓	NO	NO
	✓	✓

Pg 335

#7

$$-5(g+4) > 3(g-4)$$

$$-5(g+4) > 3(g-4)$$

$$-5g - 20 > 3g - 12$$

$$+5g$$

$$+5g$$

$$-20 > 8g - 12$$

$$+12$$

$$+12$$

$$\frac{-8}{8} > \frac{8g}{8}$$

$$-1 > g$$

$$\boxed{g < -1}$$

$$\underline{\underline{CK}} \quad g = -2$$

$$-5(-2+4) \overset{?}{>} 3(-2-4)$$

$$-5(2) \overset{?}{>} 3(-6)$$

$$-10 \overset{?}{>} -18$$

✓

$$\underline{\underline{CK}} \quad g = -1$$

$$-5(3) \overset{?}{>} 3(-5)$$

$$-15 \overset{?}{>} -15$$

NO

✓

$$\underline{\underline{CK}} \quad g = 0$$

$$-5(4) \overset{?}{>} 3(-4)$$

$$-20 \overset{?}{>} -12$$

NO

✓

Pg 335 #8

$$3 + 5t \leq 3(t+1) - 4(2-t)$$

$$3 + 5t \leq 3\check{t} + 3 - 8 + 4\check{t}$$

$$\begin{array}{rcl} 3 + 5t & \leq & 7t - 5 \\ -5t & & -5t \end{array}$$

$$\begin{array}{rcl} 3 & \leq & 2t - 5 \\ +5 & & +5 \end{array}$$

$$\frac{8}{2} \leq \frac{2t}{2}$$

$$4 \leq t \quad \therefore \boxed{t \geq 4}$$

CK $t=0$

$$3 + 5(0) \stackrel{?}{\leq} 3(0+1) - 4(2-0)$$

$$3 \stackrel{?}{\leq} 3 - 8 \quad \text{No} \quad \checkmark$$

CK $t=4$

$$3 + 20 \stackrel{?}{\leq} 15 - 4(-2)$$

$$23 \stackrel{?}{\leq} 15 + 8 \quad \text{YES} \quad \checkmark$$

CK $t=5$

$$3 + 25 \stackrel{?}{\leq} 18 - 4(2-5)$$

$$28 \stackrel{?}{\leq} 18 - 4(-3)$$

$$28 \stackrel{?}{\leq} 18 + 12 \quad \text{YES} \quad \checkmark$$