

BE-1B MONDAY 9-18-06

SOLVE, USE THE GRI

① $t - 45 \leq 13$

② $7 < x - 4$

③ $5p + 7 > 6p$

CHAPTER
6-1

④ $5x > 65$

⑤ $-5x > 65$

⑥ $-\frac{2}{5}x < -14$

CHAPTER
6-2

⑦ GRAPH THE SOLUTION TO #5
ON A NUMBER LINE

Ch. 6-3 $\Rightarrow$ SOLVING Multi-Step
INEQUALITIES
($<$, $>$, $\leq$, $\geq$)

Ex 1 Pg 332

 Check GRI each step! ①

$$\frac{9}{5}C + 32 > -31$$
$$\quad - 32 \quad \quad - 32$$

$$\frac{9}{5}C > -63$$

$$\frac{5}{9} \cdot \frac{9}{5}C > -63 \cdot \frac{5}{9}$$

$$\underbrace{\frac{5}{9} \cdot \frac{9}{5}}_1 C > \frac{7}{1} \cdot \frac{5}{9}$$

$$\boxed{C > -35} \text{ degrees Celsius (centigrade)}$$

EX 2 Pg 332

$$\begin{array}{r} -7b + 19 < -16 \\ -19 \quad -19 \end{array}$$

$$\begin{array}{r} -7b < -35 \\ \hline -7 \end{array}$$

$b > 5$

*
(÷ by negative)

3 checks:

$b < 5$	$b = 5$	$b > 5$
$b = 0$	$b = 5$	$b = 10$
$-7b + 19 < -16$	$-7b + 19 < -16$	$-7b + 19 < -16$
$19 < -16$	$-35 + 19 < -16$	$-70 + 19 < -16$
FALSE ✓	$-16 < -16$	$-51 < -16$
	FALSE ✓	TRUE ✓

Ex 4 Pg. 334

$$3d - 2(8d - 9) > 3 - (2d + 7)$$

$$3d - 2(\overset{-2}{8d} - \overset{-1}{9}) > 3 - (\overset{-1}{2d} + \overset{-1}{7})$$

$$3d - 16d + 18 > 3 - 2d - 7$$

$$\begin{array}{rcl} \swarrow & & \searrow \\ -13d + 18 & > & -4 - 2d \\ +13d & & +13d \end{array}$$

$$\begin{array}{rcl} 18 & > & -4 + 11d \\ +4 & & +4 \end{array}$$

$$\frac{22}{11} > \frac{11d}{11}$$

$$2 > d$$

$$\therefore \boxed{d < 2} \text{ or } \{d \mid d < 2\}$$

Read, "SOLUTION SET IS ALL d 's SUCH THAT $d < 2$ "

$$8(t+2) - 3(t-4) < 5(t-7) + 8$$

$$\overbrace{8(t+2)} - \overbrace{3(t-4)} < \overbrace{5(t-7)} + 8$$

$$\underline{8t} + 16 - \underline{3t} + 12 < 5t - 35 + 8$$

$$5t + 28 < 5t - 27$$

$$\begin{array}{cc} -5t & -5t \end{array}$$

$$28 \stackrel{?}{<} -27$$

FALSE $\therefore$ NO SOLUTION

or $\{\emptyset\}$



THE EMPTY SET

💡 IF VARIABLE WENT AWAY AND YOU WERE LEFT WITH A TRUE EXPRESSION,
SOLUTION IS ALL REAL NUMBERS $\{\text{ALL REAL NUMBERS}\}$

Classwork / homework:

Read Ch 6-1 to 6-3

Pg 335 # 15, 16, 20,
24, 28, 30

* GET P.R.'s signed *

· LOOK