

Chapter 3  
3.1-3.4 Review

1.  $m > -5$

7.3.  $\frac{b}{3} > -4 \cdot 3$

2.  $7n \leq 4$

$b > -12$

3.  $x < 1$

$\leftarrow + \text{---} \rightarrow$   
-13 -12 -11

4.  $x \geq -2$

8.  $\frac{-2.2x}{-2.2} \geq \frac{33}{-2.2}$   
 $x \leq -15$

5.  $6m + 1 \leq 2m - 7$

$\frac{-2m}{-2m} \quad \frac{-2m}{-2m}$   
 $\frac{4m + 1}{-1} \leq \frac{-7}{-1}$

$\leftarrow \text{---} \rightarrow$   
-16 -15 -14

$\frac{4m}{4} \leq \frac{-8}{4}$

$m \leq -2$

$\leftarrow \text{---} \rightarrow$   
-3 -2 -1

9.  $8m - 20 < 4(2m - 6)$   
 $\frac{8m - 20}{-8m} < \frac{8m - 24}{-8m}$

$-20 < -24$   
False  
No solution

6.  $3(4w - 2) \geq 6$

$\frac{12w - 6}{+6} \geq \frac{6}{+6}$   
 $\frac{12w}{12} \geq \frac{12}{12}$

$\leftarrow \text{---} \rightarrow$   
0 1 2  $w \geq 1$

10.  $3d - 9 \leq 6d + 15$

$\frac{-3d}{-3d} \quad \frac{-3d}{-3d}$   
 $\frac{-9}{-15} \leq \frac{3d + 15}{-15}$   
 $\frac{-24}{3} \leq \frac{3d}{3}$

11.  $5t - 4 - 3t \leq 2(t - 2)$

$\frac{2t - 4}{-2t} \leq \frac{2t - 4}{-2t}$   
 $-4 \leq -4$

True  
All real numbers

16.  $4 + c > 10$

$\frac{-4}{-4} \quad \frac{-4}{-4}$   
 $c > 6$

$\left. \begin{matrix} c < 6 \\ c > 6 \end{matrix} \right\}$  same

12.  $4 - 7x > 18$

$\frac{-4}{-7} \quad \frac{-4}{-7}$   
 $-7x > 14$   
 $x < -2$

Equivalent:  
the solutions  
are the same

13.  $30x + 80 \geq 710$

$\frac{-80}{30} \quad \frac{-80}{30}$   
 $30x \geq 630$   
 $x \geq 21$

at least 21 items

17.  $-2x \leq 12$

$\frac{-2}{-2} \quad \frac{-2}{-2}$   
 $x \geq -6$

$x + 10 \leq 4$   
 $\frac{-10}{-10} \quad \frac{-10}{-10}$   
 $x \leq -6$

Not equivalent  
solutions are  
not the same

14.  $x \leq 1$

15.  $x > -3$

18.  $137 + 179 + x \geq 500$

$\frac{316 + x}{-316} \geq \frac{500}{-316}$   
 $x \geq 184$   
at least \$184

19.  $x \geq 19$

$2x \geq 38$

$2x + 7 \geq 45$

} all correct

20.  $5x - 7 < 13$

$\frac{+7}{5} \quad \frac{+7}{5}$   
 $5x < 20$   
 $x < 4$

$\leftarrow \text{---} \rightarrow$   
4

Open circle  
should be on the  
graph, not a closed  
circle.