

16 February 2012
1ST 5
 Solve and Graph the inequalities.

1) $8 - 2x > 12$
 $-2x > 4$
 $x < -2$

2) $\frac{3}{4}x \leq 27$
 $x \leq 36$

3) $9 > -\frac{x}{2}$
 $-18 < x$
 $x > -18$

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Practice 3-3
 P.38 WRKBRK

1. $s \geq \frac{3}{4}$
 $s \geq \frac{3}{4}$

2. $b \geq 5$
 $b \geq 5$

3. $r > -10$
 $r > -10$

4. $n > 20$
 $n > 20$

5. $n \leq 4$
 $n \leq 4$

Handwritten notes: $(5) -\frac{1}{9}n \geq \frac{-36}{-9}$
 $n \leq 4$

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6. $n \geq -42$
 $n \geq -42$

7. $c > -4$
 $c > -4$

8. $d > -4$
 $d > -4$

9. $t > 15$
 $t > 15$

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10. $k < -9$
 $k < -9$

11. $w > 0$
 $w > 0$

12. $v > 2.5$
 $v > 2.5$

13. $m < 10$
 $m < 10$

Handwritten notes: $\frac{54 < -6k}{-6} \rightarrow -9 > k \rightarrow k < -9$
 $\frac{10}{2} = 5 < \frac{10}{2} = 5$
 $10 > m$

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14. $p > 34$
 $p > 34$

15. $v \leq -0.5$
 $v \leq -0.5$

16. $x \leq 45$
 $x \leq 45$

17. $d \leq -7$
 $d \leq -7$

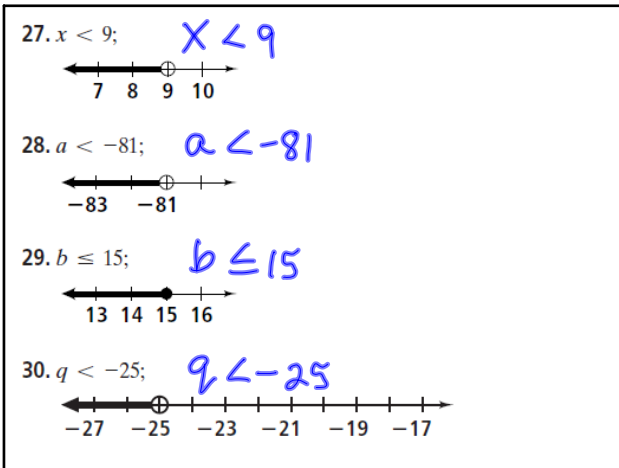
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18. $x \leq -7$
 $x \leq -7$

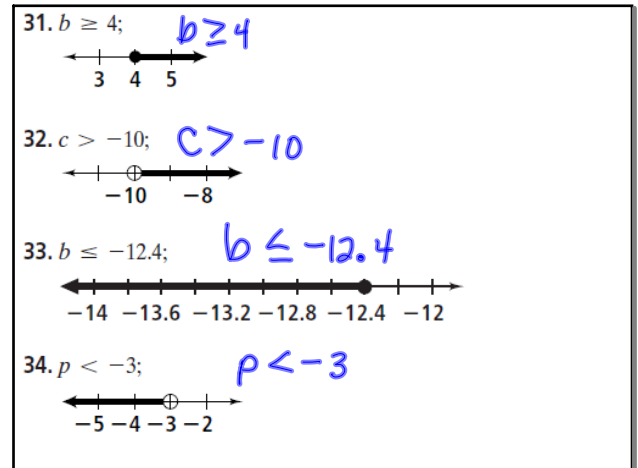
19. $c < 9$
 $c < 9$

20. $a \leq -4$
 $a \leq -4$

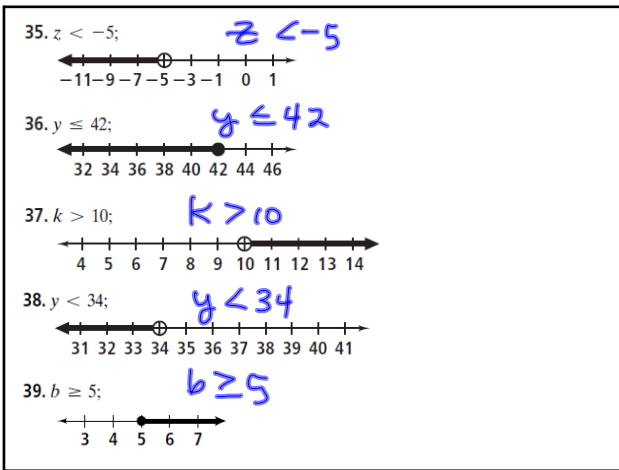
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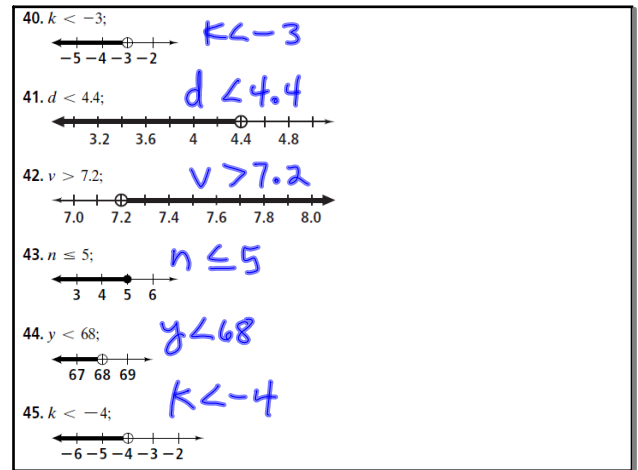
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SOLVING MULTI – STEP INEQUALITIES

Gathering Variables on One Side of an Inequality

o Solve $6z - 15 < 4z + 11$

$$\begin{array}{r} 6z - 15 < 4z + 11 \\ -4z \quad -4z \\ \hline 2z - 15 < 11 \\ +15 \quad +15 \\ \hline 2z < 26 \\ \frac{2z}{2} < \frac{26}{2} \\ \hline z < 13 \end{array}$$

o Solve $3b + 12 > 27 - 2b$

$$\begin{array}{r} 3b + 12 > 27 - 2b \\ +2b \quad +2b \\ \hline 5b + 12 > 27 \\ -12 \quad -12 \\ \hline 5b > 15 \\ \frac{5b}{5} > \frac{15}{5} \\ \hline b > 3 \end{array}$$

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SOLVING MULTI – STEP INEQUALITIES

Using the Distributive Property

o Solve $2(t + 2) - 3t \geq -1$

$$\begin{array}{r} 2(t + 2) - 3t \geq -1 \\ 2t + 4 - 3t \geq -1 \\ -t + 4 \geq -1 \\ -4 \quad -4 \\ \hline -t \geq -5 \\ \frac{-t}{-1} \geq \frac{-5}{-1} \\ \hline t \leq 5 \end{array}$$

o Solve $4p + 2(p + 7) < 8$

$$\begin{array}{r} 4p + 2(p + 7) < 8 \\ 4p + 2p + 14 < 8 \\ 6p + 14 < 8 \\ -14 \quad -14 \\ \hline 6p < -6 \\ \frac{6p}{6} < \frac{-6}{6} \\ \hline p < -1 \end{array}$$

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<p>o Solve $15 \leq 5 - 2(4m + 7)$</p> $15 \leq 5 - 8m - 14$ $15 \leq -8m - 9$ $\begin{array}{r} +9 \\ \hline \end{array} \quad \begin{array}{r} +9 \\ \hline \end{array}$ $\frac{24}{-8} \leq \frac{-8m}{-8}$ $-3 \geq m$ $m \leq -3$	<p>o Solve $8 > 3(5 - b) + 2$</p> $8 > 15 - 3b + 2$ $8 > 17 - 3b$ $\begin{array}{r} -17 \\ \hline \end{array} \quad \begin{array}{r} -17 \\ \hline \end{array}$ $\frac{-9}{-3} > \frac{-3b}{-3}$ $3 < b$ $b > 3$
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<p>o Solve $-3(4 - m) \geq 4(2m + 1)$</p> $\frac{-12 + 3m}{-3m} \geq \frac{8m + 4}{-3m}$ $\begin{array}{r} -12 \\ \hline \end{array} \geq \begin{array}{r} 5m + 4 \\ \hline \end{array}$ $\begin{array}{r} -4 \\ \hline \end{array} \quad \begin{array}{r} -4 \\ \hline \end{array}$ $\frac{-16}{5} \geq \frac{5m}{5}$ $\frac{-16}{5} > m$ $m \leq -\frac{16}{5}$	<p>o Solve $-6(x - 4) \geq 7(2x - 3)$</p> $\frac{-6x + 24}{+6x} \geq \frac{14x - 21}{+6x}$ $\begin{array}{r} 24 \\ \hline \end{array} \geq \begin{array}{r} 20x - 21 \\ \hline \end{array}$ $\begin{array}{r} +21 \\ \hline \end{array} \quad \begin{array}{r} +21 \\ \hline \end{array}$ $\frac{45}{20} \geq \frac{20x}{20}$ $x \leq \frac{9}{4}$
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PW 29
 Workbook pg. 40 # 1-18,
 24-28, 36

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