PROBLEMS AND SOLUTIONS - INEQUALITIES

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Please Send Questions and Comments to ingrid.stewart@csn.edu. Thank you!

PLEASE NOTE THAT YOU CANNOT USE A CALCULATOR ON THE ACCUPLACER - ELEMENTARY ALGEBRA TEST! YOU MUST BE ABLE TO DO THE FOLLOWING PROBLEMS WITHOUT A CALCULATOR!

Problem 1:

Find the solution set for $3 - 5x \geq 13$ in *Interval Notation*. Then graph the solution set on the number line!

Problem 2:

Find the solution set for $6x - 15 \geq 3$ in *Interval Notation*. Then graph the solution set on the number line!

Problem 3:

Find the solution set for $x - 9 < 5x + 7$ in *Interval Notation*. Then graph the solution set on the number line!

Problem 4:

Find the solution set for $-2 < 5x + 1 \leq 3$ in *Interval Notation*. Then graph the solution set on the number line!

Problem 5:

Find the solution set for $\frac{3}{4} - x > \frac{7}{8}$ in *Interval Notation*. Then graph the solution set on the number line!

Problem 6:

Find the solution set for $3x + 2(4 - 9x) - 3(x - 3) + x < 0$ in *Interval Notation*.

Problem 7:

Find the solution set for $7 - (x - 8) \leq 4x$ in *Interval Notation*.

Problem 8:

Find the solution set for $\frac{2}{3} \leq \frac{5-3x}{2} < \frac{3}{4}$ in *Interval Notation*.

Problem 9:

Find the solution set for $|x-1| < 5$ in *Interval Notation*. Then graph the solution set on the number line!

Problem 10:

Find the solution set for $3|4-2x| \leq 6$ in *Interval Notation*. Then graph the solution set on the number line!

Problem 11:

Find the solution set for $|5x+4| > 1$ in *Interval Notation*. Then graph the solution set on the number line!

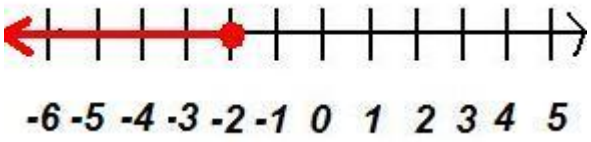
Problem 12:

Find the solution set for $|2x-1| \geq 3$ in *Interval Notation*. Then graph the solution set on the number line!

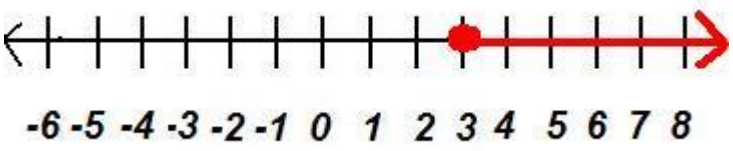
SOLUTIONS

You can find detailed solutions below the link for this problem set!

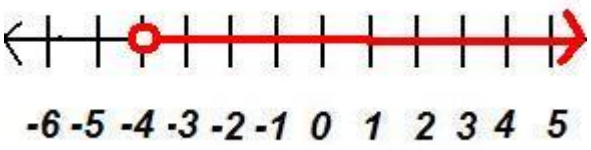
1. $(-\infty, -2]$



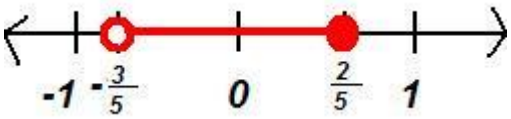
2. a. $[3, \infty)$



3. $(-4, \infty)$



4. $\left(-\frac{3}{5}, \frac{2}{5}\right]$



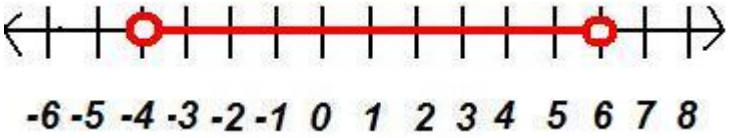
5. $\left(-\infty, -\frac{1}{8}\right)$

6. $(1, \infty)$

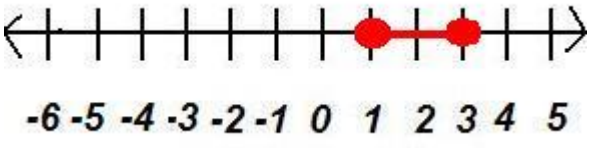
7. $[3, \infty)$

8. $\left(\frac{7}{6}, \frac{11}{9}\right]$

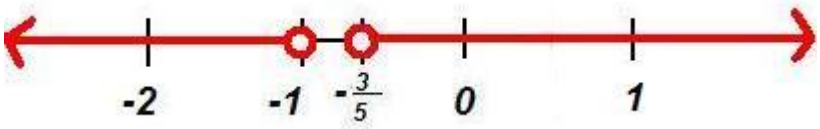
9. (-4, 6)



10. [1, 3]



11. $(-\infty,-1)\cup\left(-\frac{3}{5},\infty\right)$



12. $(-\infty,-1]\cup[2,\infty)$