Math 134 Spring 2018
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Classwork 11 Name: _____

Work on as many problems as you can together with your group members. Towards the end of lecture your group will be asked to present problems correctly to receive classwork points.

1. Express the intervals in set-builder notation and graph the intervals on a number lines.
   (a) $[-1, 4]$
   (b) $[5, 8]$
   (c) $(6, \infty)$
   (d) $(-\infty, -2)$
   (e) $(-\infty, 7)$
2. Find the following sets. Express them in interval notation.
   (a) $(-5, 3) \cap [-4, 6]$
   (b) $(-7, 6) \cap [0, 7]$
   (c) $(-2, 3) \cup [0, 6]$
   (d) $(-6, 5) \cup [-3, 6]$
   (e) $[-1, \infty) \cap (3, \infty)$
3. Use interval notation to express the solution set and graph the set on a number line if the solution set is not empty.
   (a) $5x + 3 > 23$
   (b) $2x + 4 > 10$
   (c) $-3x \geq 9$
   (d) $6(x + 1) + 4 \geq 5x + 17$
   (e) $7(x + 1) + 1 \geq 6x + 9$
4. Solve the compound inequalities
   (a) $-7 \leq x - 4 < -2$
   (b) $-3 \leq x - 2 \leq 5$
   (c) $5 < x + 5 < 8$
   (d) $-3 < 2x - 1 < 5$
   (e) $-2 \leq 3x + 7 \leq 13$
5. Solve the following absolute inequalities. Graph the solution sets.
   (a) $|x + 4| \leq 7$
   (b) $|x - 6| \geq 2$
   (c) $|2x - 2| > 6$
   (d) $-3|x - 4| \geq -15$
   (e) $6 > |5 - x|$