

Name: ANSWER KEY

Score: _____

Solve the inequality. Express your answer in terms of (1) inequalities, (2) intervals or unions of intervals, and (3) graphs.

$$2|-11-7x|-2 > 10$$

$$2|-11-7x| > 10+2 = 12$$

$$|-11-7x| > 6$$

$$\begin{array}{l|l} -11-7x < -6 & \text{or} & -11-7x > 6 \\ 11+7x > 6 & & -11+7x < -6 \\ 7x > 6-11 & & 7x < -6-11 = -17 \\ & & = -5 \end{array}$$

$$\boxed{x > -\frac{5}{7} \quad \text{or} \quad x < -\frac{17}{7}}$$

$$(-\infty, -\frac{17}{7}) \cup (-\frac{5}{7}, \infty)$$

