

Sets and Compound Inequalities HW

Name: Key

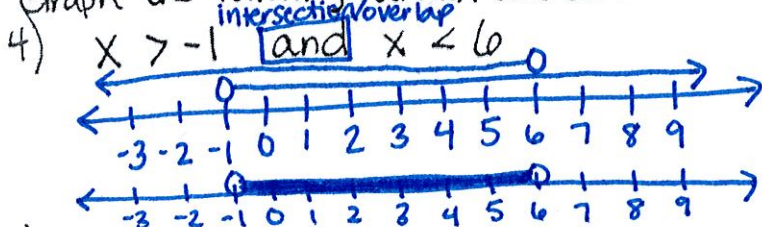
Write each of these sets in the three notations, if possible.

1) $\{1, 2, 3, 4, 5, \dots\}$ ← Roster Form
 No interval notation ← Interval notation
 $\{x | x \text{ is a natural } \#\}$ ← Set Builder Notation

2) $[-4, +\infty)$ ← Interval notation
 $\{x | x \geq -4\}$ ← Set Builder Notation
 No Roster Form ← Roster Form

3) $\{x | x \leq -3\}$ ← Set Builder Notation
 $(-\infty, -3]$ ← Interval notation
 No Roster Form ← Roster Form

Graph the following solution sets and write your answer using 2 different notation forms.

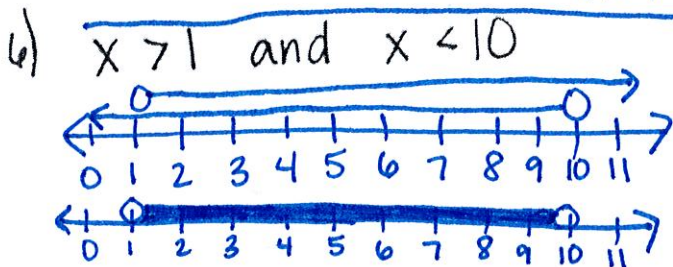
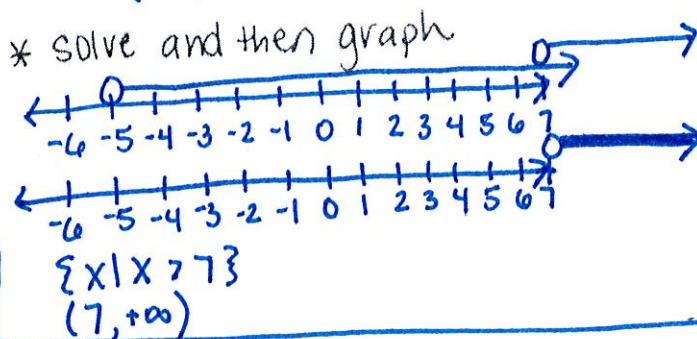


$\{x | -1 < x < 6\}$
 $(-1, 6)$

5) $-3h + 4 < 19$ and $7h - 3 > 4$

$$\begin{array}{r} -4 \quad -4 \\ -3h < 15 \\ \frac{-3h}{-3} < \frac{15}{-3} \\ h > -5 \end{array}$$

$$\begin{array}{r} +3 \quad +3 \\ 7h > 7 \\ \frac{7h}{7} > \frac{7}{7} \\ h > 1 \end{array}$$



$\{x | 1 < x < 10\}$
 $(1, 10)$