1. Consider the following flow chart which shows the steps taken to solve the equation $|x - 2| = 3$.

$$|x - 2| = 3$$

**negative case**

$x - 2 = -3$

solve for $x$

$x = -1$

**positive case**

$x - 2 = +3$

solve for $x$

$x = 5$

**combine answers**

$|x - 2| = 3$ if $x = -1$ or $5$

Construct similar charts (and find the solutions) for the equations:

- $|x + 7| = 1$; and
- $|x - 3| = 10$. 
2. Solve the following equations and match the solution with the correct interval on the right hand side.

_____  $8x < 32$  

_____  $5(x - 3) \geq 2(x + 7) + 1$

_____  $8x - 5 > 4x + 7$

_____  $-8 < 3x - 2 \leq 4$

_____  $3(x - 1) \leq \frac{2x + 10}{2}$

_____  $\frac{x + 6}{2} \leq x$

_____  $2x - 1 \geq \frac{9x + 1}{4}$

_____  $-2 < \frac{2x}{3} < 4$

_____  $\frac{3(2x - 1)}{2} > \frac{x - 3}{5} + \frac{x + 18}{10}$

_____  $2(3x - 6) \leq \frac{5x + 11}{2}$