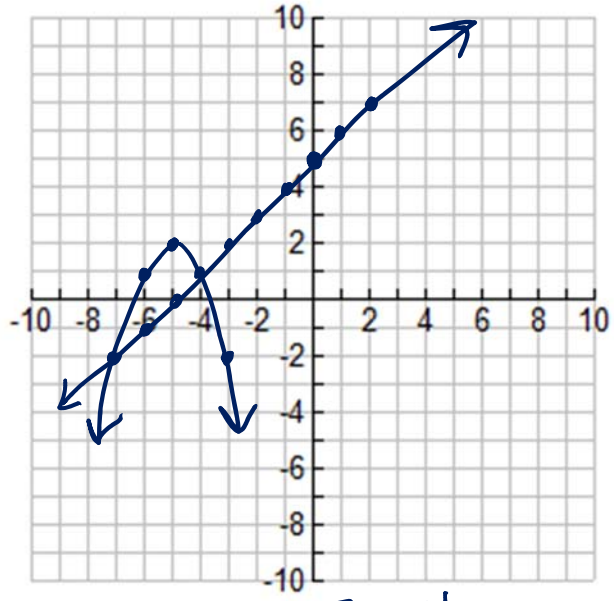
Trig H
Systems Day C

Name:

Graph the following systems. Then find when Y1 = Y2, Y1 > Y2, and Y1< Y2 using interval notation.

1. $\begin{cases} Y1 = -(x+5)^2 + 2 \\ Y2 = x + 5 \end{cases}$

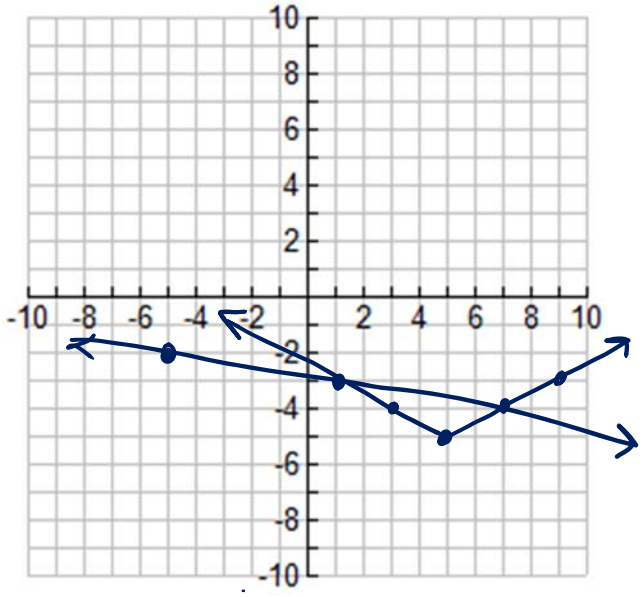


$y1 = y2$: $x = -7, -4$

$y1 > y2$: $(-7, 4)$

$y1 < y2$: $(-\infty, -7) \cup (-4, \infty)$

2. $\begin{cases} Y1 = \left|\frac{1}{2}(x-5)\right| - 5 \\ Y2 + 3 = \frac{-1}{6}(x-1) \end{cases}$

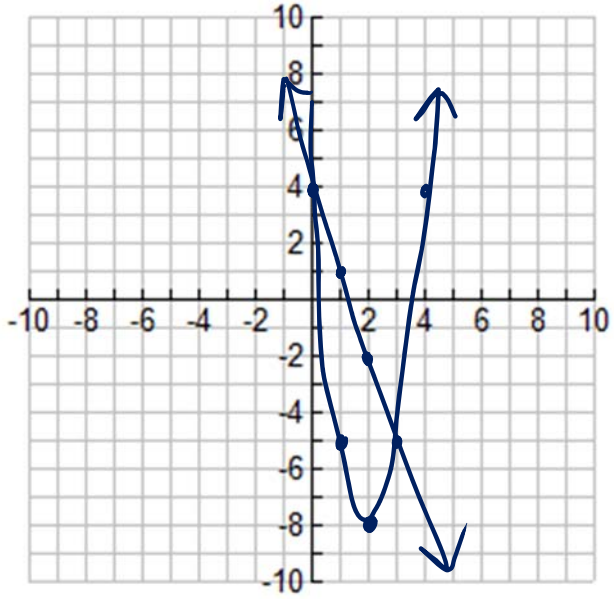


$y1 = y2$: $x = 1, 7$

$y1 > y2$: $(-\infty, 1) \cup (7, \infty)$

$y1 < y2$: $(1, 7)$

3. $\begin{cases} Y1 = 3(x-2)^2 - 8 \\ Y2 = -3x + 4 \end{cases}$



$y1 = y2$: $x = 0, 3$

$y1 > y2$: $(-\infty, 0) \cup (3, \infty)$

$y1 < y2$: $(0, 3)$