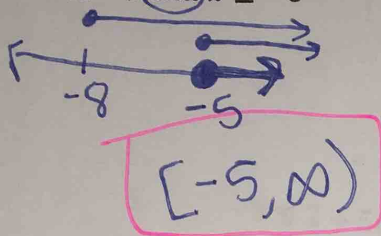


HW 7 - Begin Review

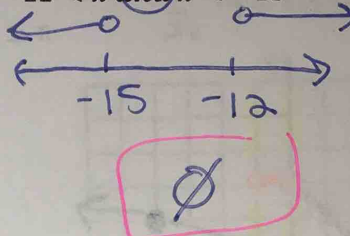
Name Key Spring 2018

Write each inequality using interval notation.

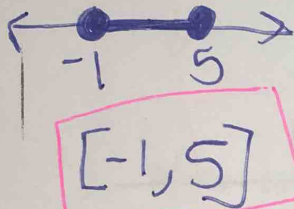
1. $x \geq -5$ and $x \geq -8$



2. $-12 < x$ and $x < -15$

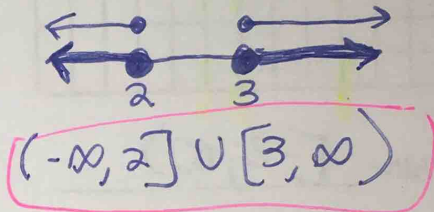


3. $-3 \leq 2 + 5t \leq 27$
 $-5 \leq 5t \leq 25$
 $-1 \leq t \leq 5$



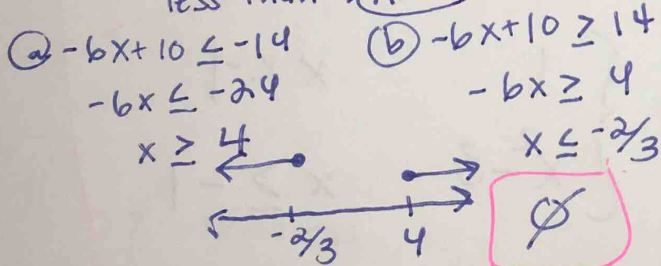
4. $6 - 7b \leq -15$ OR $5b + 3 \leq 13$

$-7b \leq -21$ $5b \leq 10$
 $b \geq 3$ $b \leq 2$



5. $6|-6x+10|+6 \leq -78$
 $6|-6x+10| \leq -84$
 $|-6x+10| \leq -14$

less than \rightarrow AND!

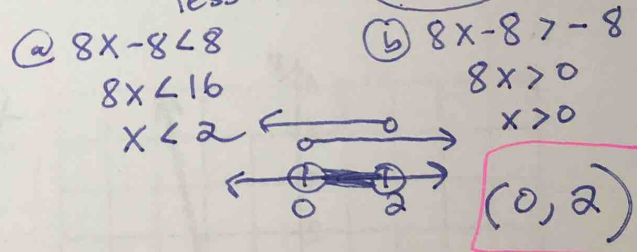


6. $2 - 10|8x - 8| > -78$

$-10|8x-8| > -80$

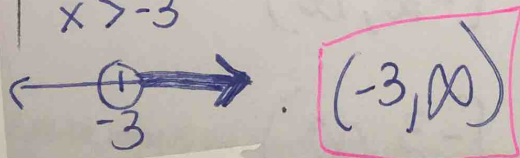
$|8x-8| < 8$

less than \rightarrow AND!



7. $-5x - 4 < 11$

$-5x < 15$
 $x > -3$

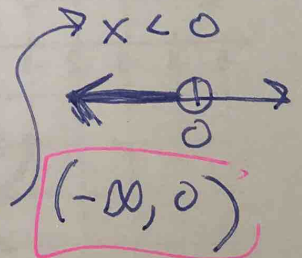


8. $0 > -x + 6x$

$0 > 5x$

$0 > x$

change it so x is on the left



For #8-10, identify the domain and range of each using interval notation.

8. $f(x) = -|-x-4|$

D: $(-\infty, \infty)$
R: $(-\infty, 0]$

9. $f(x) = \frac{-5x}{x-5}$

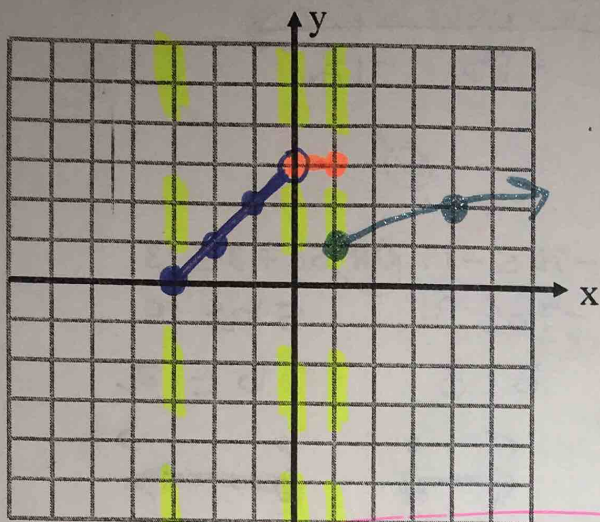
D: $(-\infty, 5) \cup (5, \infty)$
R: $(-\infty, -5) \cup (-5, \infty)$

10. $f(x) = \sqrt{x-25}$

D: $[25, \infty)$
R: $[0, \infty)$

11. Graph the piecewise function. State the domain and range.

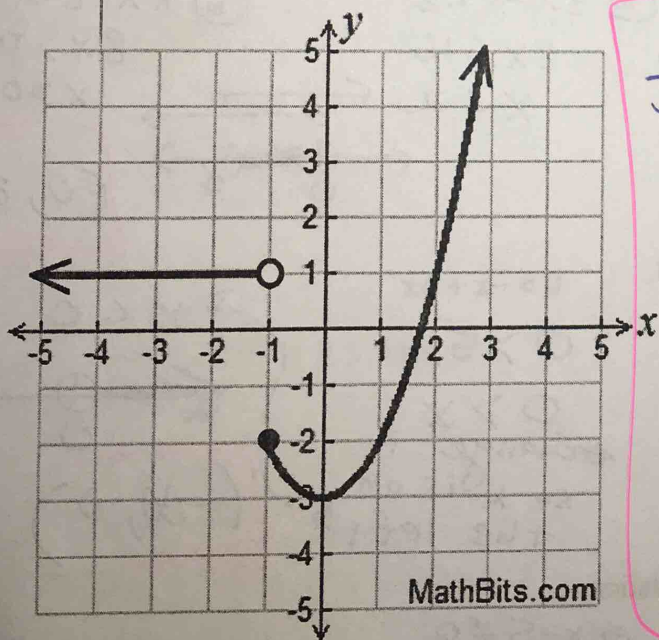
$$f(x) = \begin{cases} 3 + x, & -3 \leq x < 0 \\ 3, & 0 \leq x < 1 \\ \sqrt{x}, & x \geq 1 \end{cases}$$



DOMAIN: $[-3, \infty)$

RANGE: $[0, \infty)$

10. Write the piecewise function then identify the domain and range.



$$f(x) = \begin{cases} 1 & x < -1 \\ x^2 - 3 & x \geq -1 \end{cases}$$

D: $(-\infty, \infty)$

R: $[-3, \infty)$