Janousek - MON 2-29-16

Key

Algebra 1 Unit 5 Test Review Name Mrs. Facet

Hour: _____

Directions

Complete each problem in the space provided. Show work for full credit.

anytime absolute value - 2 answers

1. Write an inequality to represent each situation. (1 point each)
   a. Kelly needs at least $7 to buy Chipotle burrito. $x \geq 7$
   b. Jay has more than 400 friends on Instagram. $x > 400$

2. Evaluate each expression. (1 point each)
   a. $|-10 \div (\div 5)|$ 5
   b. $|-4| + |9|$ 13

3. Anthony has $200 to get his senior photos taken. Each hour the photographer charges $25 and there is an additional one-time charge of $100 for travel and other expenses.
   a. Write an inequality that expresses the maximum amount of time that Anthony can use the photographer to have his photo taken. State what the variable in your inequality represents. (3 points)

$25x + 100 \leq 200$

x = hours

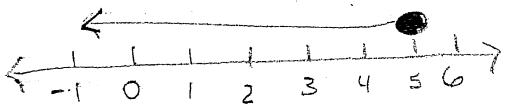
   b. Solve your inequality to find the maximum number of hours Anthony can spend using the photographer. (4 points)

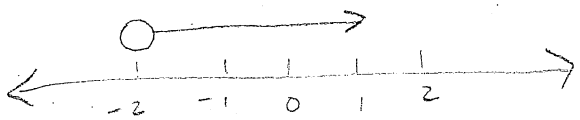
$25x + 100 \leq 200$
$-100 \quad -100$

$25x \leq 100$

$x \leq 4$

4. Graph the solution set of each inequality on a number line. (2 points each)
   a. $m \leq 5$
   b. $y > -2$



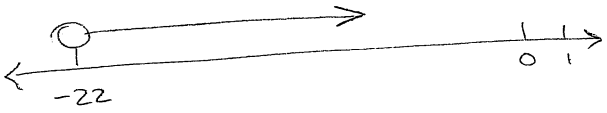


5. Solve each equation or inequality. Graph the solution on a number line. (7 points each)

a. $2(x+1) > x - 20$

$2x+2 > x-20$

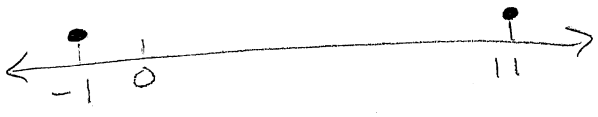
$x > -22$



b. $|x-5| = 6$

$x-5=6$ $\quad$ $x-5=-6$

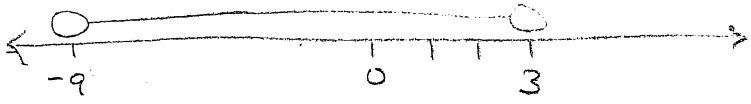
$x=11$ $\quad$ $x=-1$



c. $|n+3| < 6$

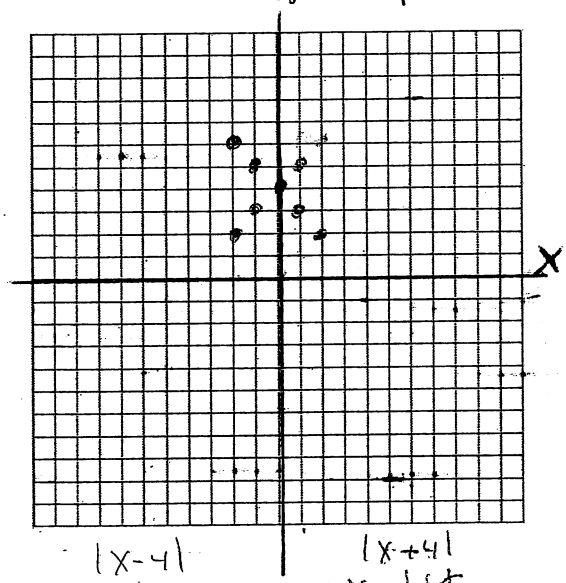
$n+3 < 6$ $\quad$ $n+3 > -6$

$n < 3$ $\quad$ $n > -9$



6. Graph each equation or inequality on a coordinate grid. (5 points each graph)

a. $y = |x-4|$ make a Tshart



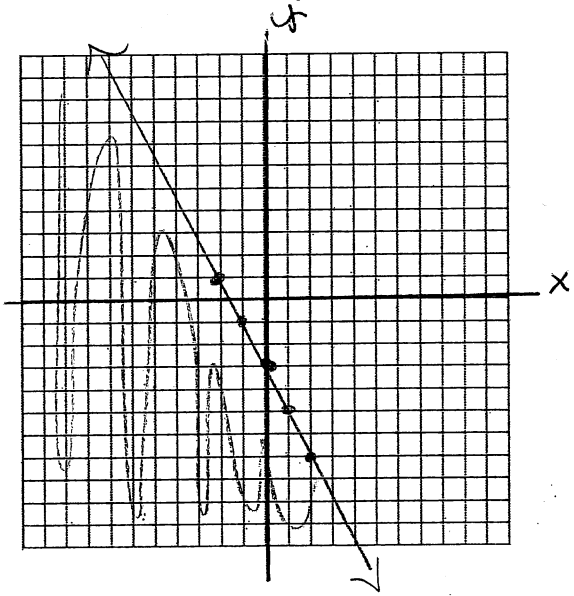
$|x-4|$

x	y
-2	6
-1	5
0	4
1	3
2	2

$|x+4|$

x	y
-2	2
-1	3
0	4
1	5
2	6

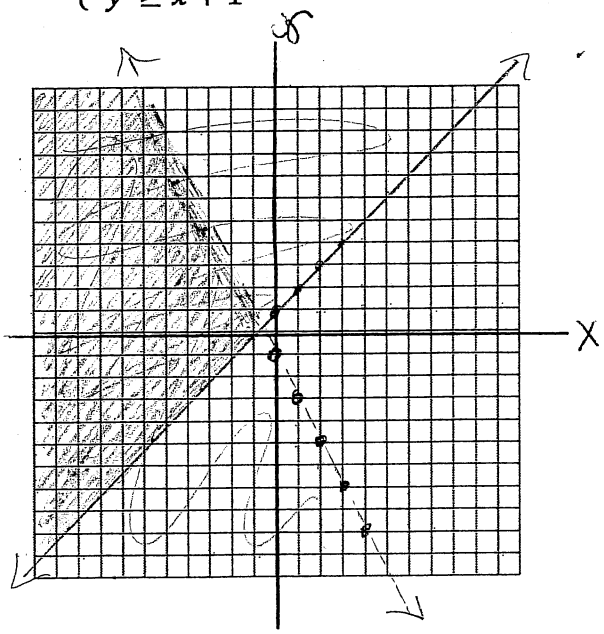
b. $-4y \leq 8x + 12$



$\frac{-4y}{-4} \leq \frac{8x}{-4} + \frac{12}{-4}$

$y \leq -2x - 3$

7. Solve the system by graphing: $\begin{cases} y < -2x - 1 \\ y \geq x + 1 \end{cases}$ (8 points)



8. ESPN sports analyst Jay Bilas guarantees that he can predict how many points a team will score in a given basketball game within 5 points .

a. Jay was asked to predict how many points the Jayhawks would score against the Cyclones, and guessed 107. Write an absolute value inequality to describe the points guaranteed by Jay Bilas. State what the variable in your inequality represents. (3 points)

$|X - 107| \leq 5$

b. Solve the inequality you wrote in part a. (4 points)

$X - 107 \leq 5$ $\quad$ $X - 107 \geq -5$

$X \leq 112$ $\quad$ $X \geq 102$

c. Graph the solution on a number line. (2 points)

d. What does the solution tell you about the number of points the Jayhawks will score against the Cyclones? (2 points)

They should score anywhere from 102 to 112 points