Alg 1 Honors
Name_____ ID: 1

Midterm Review 2019-20 (PART 2)

Date_____ Period____

Solve each equation.

1) $-4 - |2x - 4| = -18$

2) $6 - 3|x - 4| = 24$

SOLVE each compound inequality. Circle the solution. Then GRAPH its solution.

3) $-4 + n \geq -4$ or $2n + \mathbf{4} \leq 10$

4) $-1 < 9 - 2x \leq 5$

5) $3x - 10 \geq 4x - 10$ and $-7 - 2x > 10 - 3x$

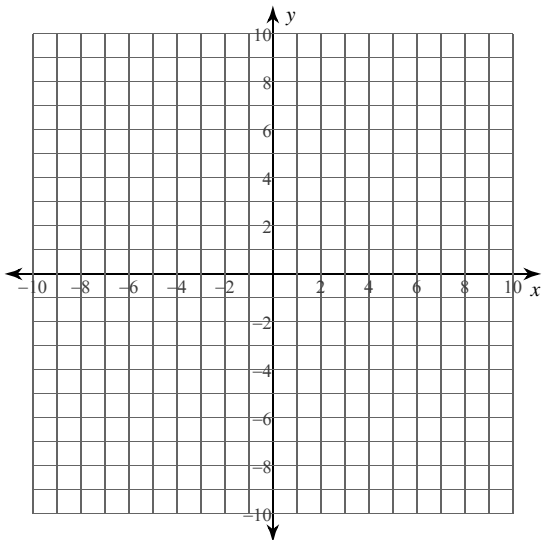**Solve each inequality and graph its solution.**

6) $-8|8k - 5| - 6 \geq -110$
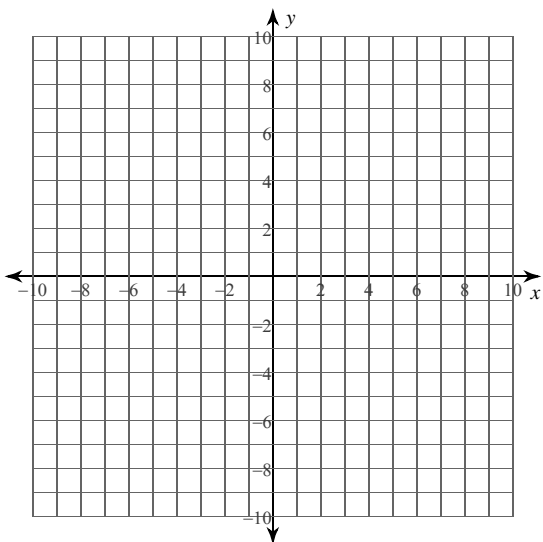
7) $5 - 3|6 - 5x| \geq 92$

8) $-3|8m + 10| + 5 \leq -85$

Solve the system by graphing; Then check the solution algebraically
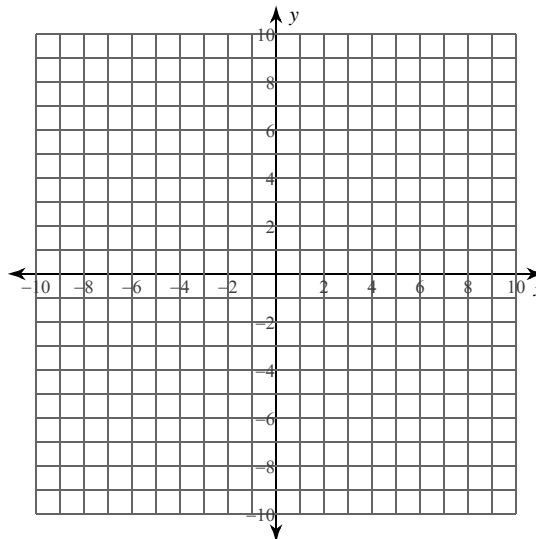
9) $2x + 3y = 27$
   $x - y = -4$

Sketch the solution to each system of inequalities.

10) $y > -\dfrac{4}{3}x - 6$

    $y > \dfrac{5}{3}x + 3$

11) $3x - 2y \geq -8$
     $x + 2y \leq -2$

Solve each system by elimination. Then check the solution algebraically

12) $8x + 6y = -18$
 $13x - 6y = 18$

13) $-5x + 12y = -47$
 $-5x + 10y = -45$

Solve the system by substitution. Then check the solution algebraically

14) $y = 2x - 30$
 $8x - 6y = 200$

Solve USING ANY METHOD. Then check the solution algebraically

15) $14x - 13y = -180$
$-2x + y = 36$

16) Flying with the wind a plane went 250 mph. Flying into the same wind the plane only went 202 mph. What is the speed of the wind? How fast would the plane go if there were no wind?

Define variables: X=_____
                   Y=_____

Define system:
            EQ1: _____

            EQ2: _____

Solve the system:

Answer (in words):

17) The water park is a popular field trip destination. This year the senior class at High School A and the senior class at High School B both planned trips there. The senior class at High School A rented and filled 3 vans and 14 buses with 651 students. High School B rented and filled 9 vans and 11 buses with 558 students. Every van had the same number of students in it as did the buses. How many students can a van carry? How many students can a bus carry?

Define variables: X=_____

                        Y=_____

Define system:

               EQ1: _____

               EQ2: _____

Solve the system:

Answer (in words):