Algebra Name_____

Tri 1 Review Practice Final

Date_____ Period____

Solve each proportion.

1) $\frac{r}{9} = \frac{5}{10}$

2) $\frac{4}{10} = \frac{10}{n-3}$

Solve the equation. Show all work.

3) $\frac{6}{5} + \frac{9}{5}b = -\frac{1}{2}b + \frac{1}{2}\left(b - \frac{9}{5}\right)$

4) For 2016 Starbucks likely used between 2.916 and 2.946 billion cups at their stores, or an average of 8,070,428 per day. Use dimensional analysis to determine the number of cups used per second. Round your answer to the nearest whole cup.

5) Max sells lemonade for $2 per cup and candy for $1.50 per bar. He earns $425 selling lemonade and candy. Write a linear model that relates the number of cups of lemonade he sold to the number of bars of candy he sold. If Max sold 90 bars of candy, how many cups of lemonade did he sell?

Write the standard form of the equation of the line through the given points.

6) through: $(5, 5)$ and $(0, -3)$

Write the slope-intercept form of the equation of the line through the given points.

7) through: $(-1, 4)$ and $(2, 3)$

Write the slope-intercept form of the equation of the line described.

8) through: $(-5, 5)$, perp. to $y = \frac{5}{4}x - 4$

Write the point-slope form of the equation of the line described.

9) through: $(5, -2)$, parallel to $y = -\frac{1}{5}x - 5$

Write the standard form of the equation of each line.

10) $y = -\frac{9}{4}x - 3$

Write the slope-intercept form of the equation of each line.

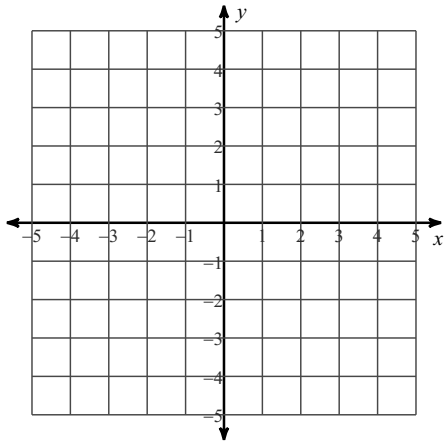
11) $y - 5 = -7(x + 5)$

Solve the system using the best method.

12) $-2x - 8y = 6$
$x + 4y = -4$

Solve each system by graphing.

13) $x + 4y = -8$
$x - 2y = -2$



Write and solve a system of equations for the situation below. Use the best method for solving the system.

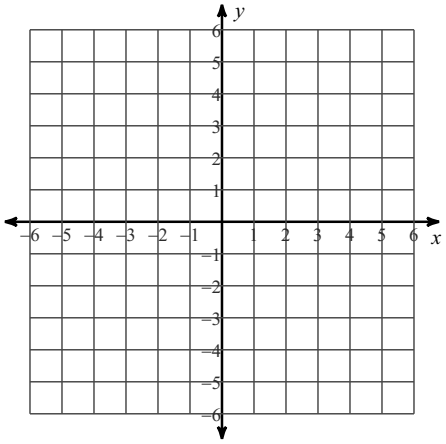
14) The senior classes at High School A and High School B planned separate trips to the state fair. The senior class at High School A rented and filled 12 vans and 12 buses with 396 students. High School B rented and filled 6 vans and 7 buses with 223 students. Every van had the same number of students in it as did the buses. How many students can a van carry? How many students can a bus carry?

Solve the inequality and graph its solution.

15) $-8(1+4n)+3 \geq -133$

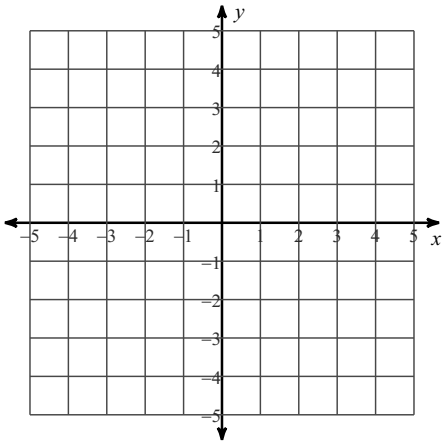
Sketch the graph of each linear inequality.

16) $y > \frac{5}{4}x + 2$



Sketch the solution to each system of inequalities.

17) $2x - y < 1$
$x + y > 2$



Answers to Tri 1 Review Practice Final

1) $\left\{\frac{9}{2}\right\}$

2) $\{28\}$

3) $\left\{-\frac{7}{6}\right\}$

4) About 93 cups per second

5) x cups of lemonade sold, y number of candy bars sold, 2x + 1.50y = 425, 145 cups of lemonade will be sold.

6) $8x - 5y = 15$

7) $y = -\frac{1}{3}x + \frac{11}{3}$

8) $y = -\frac{4}{5}x + 1$

9) $y + 2 = -\frac{1}{5}(x - 5)$

10) $9x + 4y = -12$

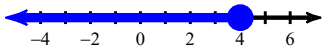
11) $y = -7x - 30$

12) No solution

13) $(-4, -1)$

14) Van: 8, Bus: 25

15) $n \leq 4$:



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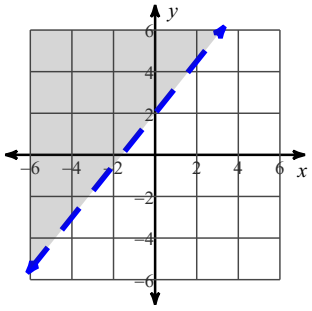

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