Mastery Algebra 1 **Final Review #1** Name: KEY

Simplify the following problems and show your work! (Don't just use a calculator!)

1. $\frac{7}{12}-\frac{13}{84}=$

$\frac{3}{7}$

2. $\frac{17}{8}+\frac{17}{24}=$

$\frac{17}{6}$

3. 8% of what number is 12?

8% of 150 is 12.

4. What is 13% of 562?

13% of 562 is 73.06

5. What % of 250 is 100?

40% of 250 is 100.

6. $16-(7-13)+5\cdot 2-3=$

29

7. Put in slope intercept form

$3x - 5y = 15$

$y = \frac{3}{5}x - 3$

8. a. List a point in quadrant II. (−, +)
   b. List a point on the x-axis. (#, 0)
   c. List a point in quadrant III. (−, −)
   d. List a point on the y-axis. (0, #)

answers will vary

9. During a 30 minute lunch, 72 bottles of water were purchased from a drink machine. What is the rate at which water bottles were being purchased?

Drinks were purchased at the rate of 2.4 drinks per minute.

Write the equation that represents each situation:

10. An appliance repairman charges a first hour fee of $40 and an hourly rate of $55 per hour.

$C(h) = 55h + 40$

11. A car rental agency charges $.05 a mile along with a daily rate of $25 for a midsize car.

$C(m) = .05m + 25$

Find the slope of a line passing through the following two points:

12. (3, 2) and (-5, 9)

$-\frac{7}{8}$

13. (-9, 6) and (3, 6)

0

14. (-7, 4) and (8, -2)

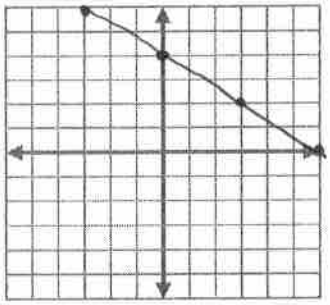
$-\frac{2}{5}$

15. (3, -8) and (3, -2)

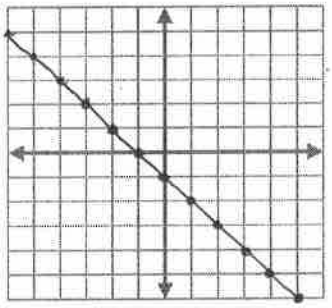
undefined

Draw the graph of each equation:

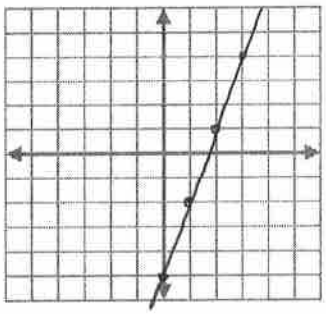
16. $y = -\frac{2}{3}x + 4$



17. $y = -x - 1$



18. $y = 3x - 5$



Write the equation of each line described in slope intercept form:

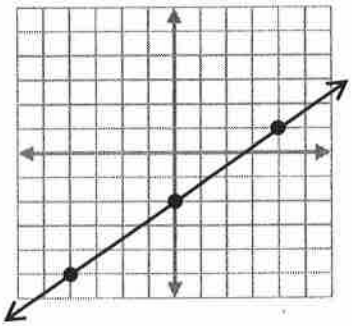
19. slope –3 and point (5, -2)

$y = -3x + 13$

20. passing through (2, 1) & (-3, -9)

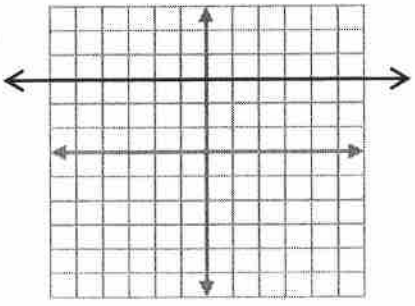
$y = 2x - 3$

21.



$y = \frac{3}{4}x - 2$

22.



$y = 3$

23. In the morning, the temperature on your outdoor thermomoter was 67°. Over a 6-hour period the temperature increased 2° per hour. Write an equation that represents the situation and state the starting point and slope values.

$y = 2h + 67$

The starting point is 67°.

The slope is 2° per hour.