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

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

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

3.   8% of what number is 12?

4.   What is 13% of 562?

5.   What % of 250 is 100?

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

7. Put in slope intercept form

    $3x - 5y = 15$

8. a.   List a point in quadrant II.

     b.   List a point on the x-axis.

     c.   List a point in quadrant III.

     d.   List a point on the y-axis.

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?

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.

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

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

12.   (3, 2) and (-5, 9)   13.   (-9, 6) and (3, 6)
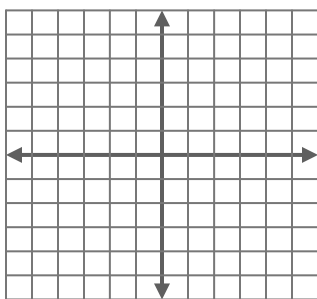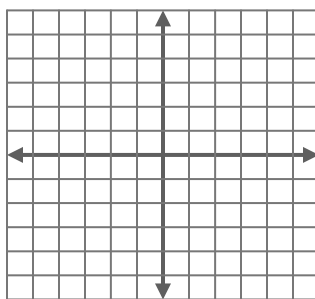
14.   (-7, 4) and (8, -2)   15.   (3, -8) and (3, -2)
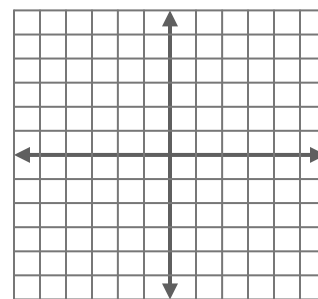
Draw the graph of each equation:

16. $y = -\dfrac{2}{3}x + 4$ 17. $y = -x - 1$ 18. $y = 3x - 5$

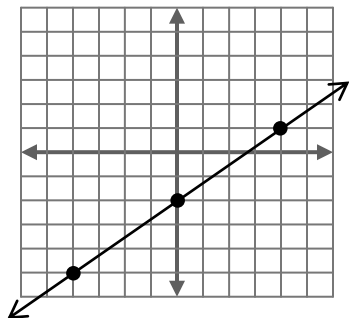**Write the equation of each line described in slope intercept form:**

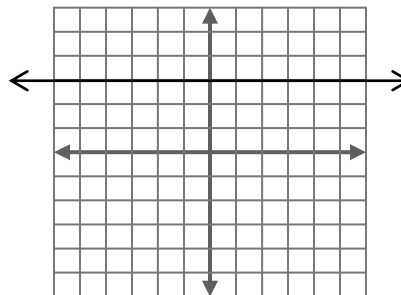19.   slope –3 and point (5, -2)   20. passing through (2, 1) & (-3, -9)

21.   22.

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.