

Find the x -intercept and y -intercept for each equation. Write the intercepts as an ordered pair (x, y) . Do **not** round your answer.

1. $5x + 10y = 25$

x -int: (_____, _____)

y -int: (_____, _____)

2. $x - y = 1.5$

x -int: (_____, _____)

y -int: (_____, _____)

3. $y = 4x + 8$

x -int: (_____, _____)

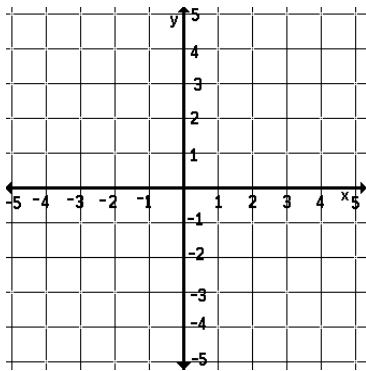
y -int: (_____, _____)

Find the x -intercept and y -intercept for each equation. Then, graph each equation.

4. $x + 2y = -5$

x -int: (_____, _____)

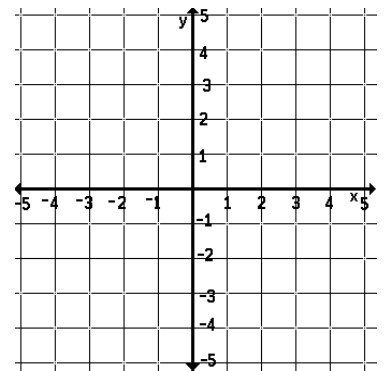
y -int: (_____, _____)



5. $5x - 3y = 15$

x -int: (_____, _____)

y -int: (_____, _____)



Convert each equation from standard form to slope-intercept form ($y = mx + b$).

6. $2x - 6y = 12$

Slope-int: _____

7. $-4x - 5y = 25$

Slope-int: _____

Convert each equation from slope-intercept to standard form $Ax + By = C$.

8. $y = 4x + 12$

Standard: _____

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

Standard: _____

Convert between degrees Fahrenheit and degrees Celsius using the literal equation given. If necessary, round to the nearest 100th. $C = \frac{5}{9}(F - 32)$

10. 44°F

11. 56°C

12. -15°F

13. -12°C

Solve each literal equation for the indicated variable.

14. $V = \frac{2}{3}lwh$ Solve for l .

15. $A = \frac{1}{2}bh$ Solve for b .

16. $A = \pi r^2$ Solve for r .

17. $D = rt^3$ Solve for t .

18. $V = \frac{1}{3}\pi r^2 h$ Solve for r .

19. $A = \frac{1}{2}h(b_1 + b_2)$ Solve for h .

20. The table shows the number of miles Kata traveled for work each year.

Year	2006	2007	2008	2009	2010	2011
Miles Traveled	8300	7550	8005	7600	6935	6405

x_1	y_1
6	8300
7	7550
8	8005
9	7600
10	6935
11	6405

$$y_1 \sim mx_1 + b$$

STATISTICS

$$r^2 = 0.812$$

$$r = -0.901$$

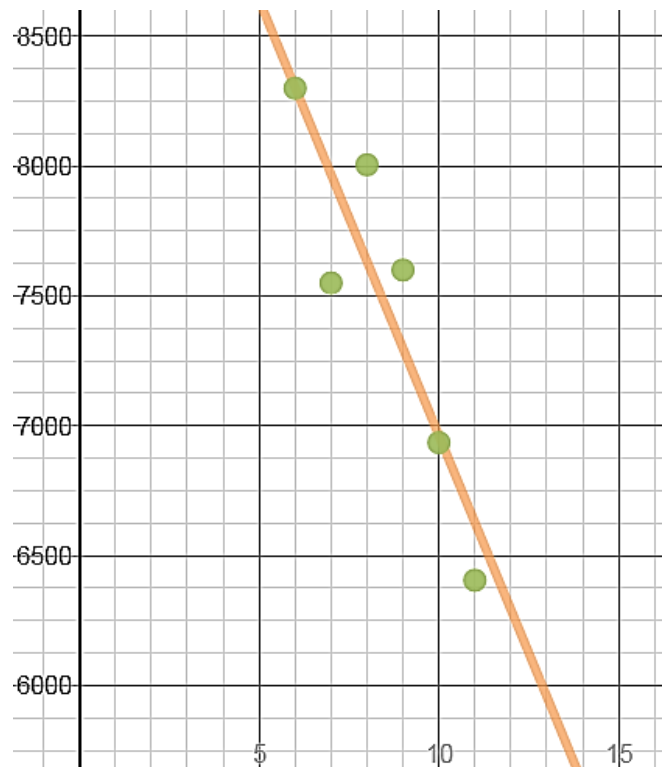
PARAMETERS

$$m = -335$$

RESIDUALS

e_1

$$b = 10313$$



A. Write the linear regression equation for the data. Round the slope and y -intercept to a whole number.

Hint: $y = mx + b$

B. Identify the correlation coefficient, or r -value. What does this r -value tell you about the line of best fit?

C. Use the linear regression equation to predict the number of miles Kata will travel in 2014.

D. Use the linear regression equation to predict approximately what year will Kata reach 5000 miles?

21. Darla has \$75 to spend at the bookstore. Books cost \$16 and magazines cost \$8.

A. Define your variables and write an equation to represent this situation.

B. Use the equation to determine how many magazines Darla can buy if she buys 3 books. Round to a whole number if necessary.

C. Use the equation to determine the number of books Darla can buy if she buys 5 magazines. Round to a whole number if necessary.