

Chapter 5: Writing Linear Equations Study Guide

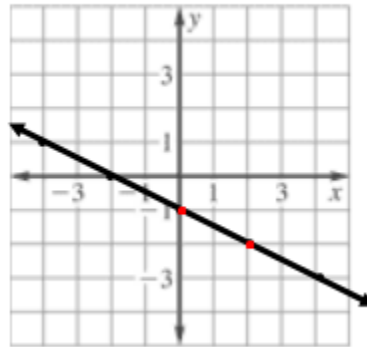
5.1: Write equations of lines given slope and y – intercept or two points

Write the equation of the line with the given information:

Ex: Slope: 0, y – intercept: $\frac{1}{2}$

Ex: Passes through (0, 5) and (1, 7)

Ex: has the function values $f(1) = -9, f(0) = -11$ **Ex:**



5.2: Write the equation of lines given slope and one point, or two points

Write the equation of the line with the given information:

Ex: Slope 3, passes through (1, 1)

Ex: Slope -5 , passes through $(-4, 7)$

Ex: Passes through (1, 4) (2, 7)

Ex: Passes through $(-2, -2)$ (1, -1)

5.5: Write Equation of Parallel and Perpendicular Lines

Ex: Write the equation of the line that is parallel to $-6x + y = -1$ and passes through the point $(1, 7)$

Ex: Write the equation of the line that is perpendicular to $y + 3 = 2x$ and passes through the point $(-5, 2)$

Ex: Determine which lines, if any, are parallel or perpendicular:

a. $y = \frac{3}{5}x + 1$

b. $5y = 3x - 2$

c. $10x - 6y = -4$

5.4: Write Equations of Lines in Standard Form

Write two equivalent equations in standard form:

Ex: $3x - 6y = 9$

Write equations of lines in standard form using the given information:

Ex: $(4, 4)$ and $(8, 2)$

Ex: $(-2, 3)$ and $(-4, -5)$

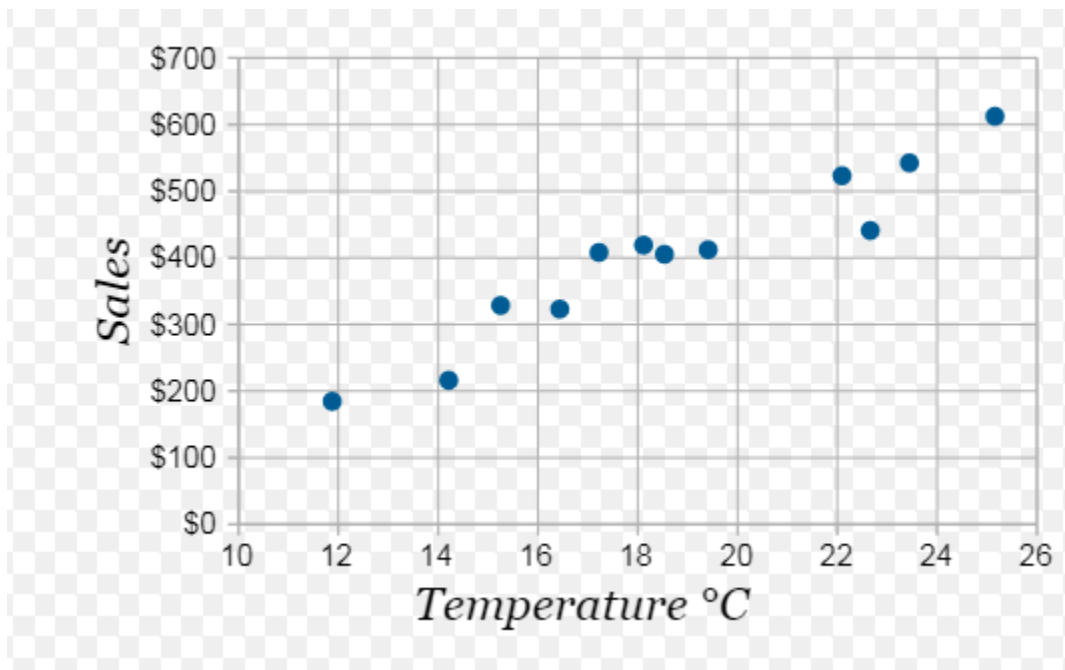
Ex: Write the equations of the horizontal and vertical lines that pass through the point $(7, 2)$

Complete equations in standard form:

Ex: $5x + By = 6$; (2, 1)

Ex: $Ax + 5y = 7$; (4, 3)

Use the scatter plot below to determine the type of association and decide which line is most representative of the relationship between x and y .



A. Please choose the best description of the relationship between x and y .

1. Relatively no correlation
2. Positive correlation
3. Negative correlation

B. Which equation provides the best description of the relationship between x and y ?

1. $y = 35x$
2. $y = -12x + 150$
3. $y = 30x + 150$
4. $y = 25x - 10$