

Linear Equation Review

- Find the slope between these points: $(-2, 1)$ and $(3, 7)$.
- For the line $y = -4x + 8$:
 - What is its slope?
 - What is its y-intercept?
 - Find its x-intercept.
- Write the equation of the line that passes through these points: $(3, -4)$ and $(5, 2)$ in:
 - Point-slope form
 - Slope-intercept form
- Change the form of this line to slope-intercept: $6x - 5y = 15$
- What is the slope of any line parallel to $y = \frac{1}{4}x - 5$?
- Write the equation of the line that is parallel to $2x + 3y = 7$ and goes through $(4, 9)$.
- What is the slope of any line perpendicular to $y = -3x + 7$?
- Write the equation of the line that is perpendicular to $4x - 2y = 11$ and goes through $(-3, 8)$.
- What is the length of the line segment between $(3, 10)$ and $(6, 2)$?
- Determine whether these points are collinear: $(-2, 1)$ $(-1, 0)$ $(2, -2)$
- A business purchases a piece of equipment for \$875. After 5 years, the equipment will be out of date, having no value (\$0).
 - Write a linear equation giving the value of the equipment V in terms of time in years ($0 \leq t \leq 5$ years).
 - Find the value of the equipment at $t = 2$ years.
 - Estimate (to 2 decimal places) the time when the value of the equipment is \$200.
- A company reimburses its sales representatives \$150 per day for lodging and meals plus 65¢ per mile driven.
 - Write the linear equation giving the daily cost C to the company in terms of x , the number of miles driven.
 - How much does it cost the company if a sales representative drives 173 miles on a given day?