

## Section 5.4 – Finding the Equation of a Line – The Point-Slope Form

### Problem Set 1

Find the equation of the line through the following points.

1. (4, 7) and (5, 2)
2. (7, 2) and (-2, -1)
3. (-4, -1) and (0, 1)
4. (50, 10) and (-4, 12)
5. (4.2, 2) and (-2.8, 4)
6. (6.1, 10.1) and (-2, 4.1)
7. (4, 2) and (-2, -8)
8. (-2, 0) and (6, -8)
9.  $\left(\frac{4}{3}, -1\right)$  and (6, 2)
10.  $\left(\frac{5}{4}, \frac{1}{2}\right)$  and  $\left(\frac{1}{5}, -2\right)$
11. (4, 3) and (-2.6, -1)
12.  $\left(-\frac{2}{3}, \frac{1}{3}\right)$  and  $\left(\frac{5}{6}, \frac{1}{8}\right)$

### Applications

13. **Cost of Goods Sold** A company makes a deal with one of its customers to sell them 100 units of a product for \$1,200 or 200 units for \$2,000. Find a linear equation that describes the relationship between the number of units purchased and their cost.
14. **Cost of Goods Sold** Use your equation from the previous question to determine the cost of a purchase of 300 units.
15. **Currency Conversion** 10 US dollars is equivalent to 827 Japanese yen. 25 US dollars is equivalent to 2067.5 Japanese yen. Find a linear equation that describes the relationship between the two currencies.
16. **Currency Conversion** How many yen are equal to \$100?