

- *Get a calculator.
- *Get in your assigned seat.
- *Complete the Bell work below.

Write the equation of the line that passes through the points $P(2,10)$ and $Q(9,-4)$.

Write the equation of the line that passes through the points $P(2, 10)$ and $Q(9, -4)$.

$$y = mx + b$$

$$m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{-4 - 10}{9 - 2} = \frac{-14}{7} = -2$$

$$10 = -2(2) + b$$

$$10 = -4 + b$$

$$\begin{array}{r} +4 \quad +4 \\ \hline \end{array}$$

$$14 = b$$

$$y = -2x + 14$$

Write the equation of a line parallel to $y = -2x + 14$.

$$m = -2 \quad m_{\parallel} = -2$$

$$y = -2x + 6$$

Write the equation of a line perpendicular to $y = -2x + 14$.

$$m = -\frac{2}{1} \quad m_{\perp} = \frac{1}{2}$$

$$y = \frac{1}{2}x + 10$$

Jason has 2 test scores in Math class. One is an 89 and the other is a 73. What is Jason's test average?

$$\begin{array}{r} 89 \\ +73 \\ \hline 162 \end{array} \div 2 = 81$$

Explain what this average represents.

midpoint

$$P(\overset{x_1}{2}, \overset{y_1}{10}), Q(\overset{x_2}{9}, \overset{y_2}{-4})$$

$$\left(\frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2} \right)$$

$$\left(\frac{2+9}{2}, \frac{10+(-4)}{2} \right)$$

$$(5.5, 3)$$

use to
determine
if a point/line
bisects a
segment

Distance - how long something is.

$$P(\overset{x_1}{2}, \overset{y_1}{10}) \quad Q(\overset{x_2}{9}, \overset{y_2}{-4})$$

$$d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$$

$$d = \sqrt{(9 - 2)^2 + (-4 - 10)^2}$$