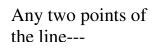
Linear Connections



pt. 1:
$$(x_1, y_1)$$

pt. 2:
$$(x_2, y_2)$$

horizontal line:

 $y = y_1$

vertical line:

.. ..

 $x = x_1$

Slope Formula

$$m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{r}{s}$$

Point-Slope Form of Line

$$y - y_1 = m(x - x_1)$$

slope of any parallel line is the same $=\frac{r}{s}$

slope of any perpendicular line is opposite reciprocal

$$=-\frac{s}{r}$$

Standard Form of Line A, B, & C are integers, A is positive

$$Ax+By=C$$

Slope-Intercept Form of Line slope is m, y intercept is b

$$y = mx + b$$