

Name _____ Date _____ Period _____

Equations of Lines

Determine the equation of the line with the given slope and point. Write in slope intercept form.

- $m = 3$ and a point $(1, 5)$.
- $m = -2$ and a point $(-7, 4)$.
- slope of 5 and a point $(2, -7)$.
- slope $= -3$ and a point $(1, -2)$.
- slope $= \frac{2}{3}$ and a point $(5, -4)$.
- slope $= -\frac{3}{4}$ and a point $(3, 4)$.
- $m = \frac{2}{7}$ and a point $(-3, -6)$.
- $m = -\frac{4}{5}$ and a point $(2, -8)$.

Determine the equation of the line that contains the given points. Write in slope intercept form.

- passes through $(-5, -8)$ and $(3, 8)$.
- passes through $(1, 6)$ and $(3, 2)$.
- passes through $(-1, 2)$ and $(1, -4)$.
- passes through $(-3, 7)$ and $(-6, 5)$.
- passes through $(-2, 1)$ and $(-9, -3)$
- passes through $(2, 3)$ and $(5, 1)$.

Determine the equation of the line that contains the given point and is parallel or perpendicular to the given line. Write in slope intercept form.

- passes through $(5, 4)$, parallel to $y = 2x - 1$.
- passes through $(2, -1)$, parallel to $y = -4x + 3$.
- passes through $(8, -3)$, perp. to $y = \frac{2}{3}x + 4$.
- passes through $(3, -2)$, perp. to $4x - y = 7$.
- passes through $(2, 5)$, perp. to $3x - 7y = 21$.
- passes through $(4, -1)$, parallel to $2x - 5y = 10$.
- passes through $(3, -3)$, perp. to $x - 3y = 9$.
- passes through $(-5, 7)$, parallel to $5x - y = 5$.

Determine the equation of the line with the given properties. Write in slope intercept form if possible.

- passes through $(-2, 7)$, parallel to $x = 9$.
- passes through $(-11, 12)$, perpendicular to $x = 7$.
- passes through $(3, -4)$, perpendicular to $y = 5$.
- passes through $(-8, 1)$, parallel to $y = 0$.
- passes through $(2, -7)$, parallel to $x = -3$.
- passes through $(-6, -2)$ perpendicular to $x = 7$.
- passes through $(-5, 1)$ and $(-5, 3)$.
- passes through $(3, -6)$ and $(7, -6)$.
- passes through $(3, 3)$ and $(3, -4)$.
- passes through $(0, 5)$ and $(3, 5)$.
- passes through $(0, -4)$ and $(0, 3)$.
- passes through $\left(2, \frac{1}{2}\right)$ and $\left(-7, \frac{1}{2}\right)$.