

Name: _____ Period: _____ Date: _____

- Give equations; determine whether the following lines are parallel, perpendicular or neither.
 - $4x - 2y = 8$ and $y = 2x + 7$
 - $y = (1/4)x + 6$ and $y = 6 + 4x$
 - $y + 3x = 6$ and $y = (1/3)x + 5$
- Given two points on a line, determine whether the following lines are parallel, perpendicular or neither.
 - Line 1: $(-3, 1)$ and $(-7, -2)$ Line 2: $(2, -1)$ and $(8, 4)$
 - Line 1 : $(10, 5)$ and $(-8, 9)$ Line 2: $(2, -4)$ and $(11, -6)$
- Write the equation of the line a) parallel to the given line and through the given point, b) perpendicular to the given line through the given point, in point slope form and standard form.
 $P(3, 8)$, $y=(1/5)(x + 4)$
- Write the equation of a line a) parallel to the given line and through the given point, b) perpendicular to the given line through the given point, in slope intercept form and standard form.
 $P(4, 5)$, $y=3x +-7$
- Write the equation of a line a) parallel to the given line and through the given point, b) perpendicular to the given line through the given point in standard form.
 $P(-3, 7)$, $x = 3$
- Find the equation of the perpendicular bisector of the line segment with the given endpoints.
 - $(-6, -6)$ and $(2, 2)$
 - $(10, 22)$ and $(4, 10)$
- Is the quadrilateral QRST a parallelogram given $Q(5,9)$, $R(9,7)$ $S(8,4)$ and $T(4, 6)$?
- Is a triangle with vertices $(-2, 4)$, $(3, 6)$ and $(2, -3)$ a right triangle?
- Solve the following system graphically
 $Y = 4x + 9$
 $Y - 4x = 1$
What happened? Why?
- Can two non-vertical parallel lines have the same y-intercept?
- The line through $(-1, k)$ and $(-7, -2)$ is perpendicular to the line $y = x + 1$. What is the value of k ?
- The line through $(9, k)$ and $(-21, 3)$ is parallel to the line $6x - 9y = 11$. What is the value of k ?
- The price per share for Yahoo! Inc. was \$0.03 in 1997 and \$0.30 in 1998. Using only this information, write a linear equation that gives the price per share in terms of the year. Then predict the price for a share of Yahoo! for 2015.
- Your company has purchased a \$12,000 machine that has a useful life of 8 years. The salvage value at the end of 8 years is \$2000. Write a linear equation that describes the book value of the machine each year.

