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Email as pdf to ggilchrist@marisths.org, or submit to schoology if possible.

## Show your work

Box Your Answers
Calculators Allowed
Simplify All Fractions
Graph the following equations. Identify which form the equation is in (slope y-intercept, standard, point-slope, or neither). Make a table of at least 5 inputs and outputs ( $x$-values and $y$-values). Identify the $x$ - and $y$-intercepts (these might not be whole numbers. If they aren't whole numbers, give them to the nearest tenth or as a reduced fraction).

1) $y=3 x-4$

Form: $\qquad$ 2) $y=-x+2$

Form: $\qquad$

| $x$ | $y$ |
| :--- | :--- |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

$x$-int:
$y$ - int:


$x$ - int:
$y$ - int:

3) $y=-\frac{2}{3} x+6$ Form: $\qquad$
$x$-int:
$y$-int:

$y$-int:
4) $y=7 \quad$ Form: $\qquad$

5) Give the equation of a line parallel to $y=\frac{3}{4} x+10$ that contains the point $(-2,5)$. It can be written in any form.

Graph the following equations. The directions are the same as \#1-4 from the previous page.
6) $5 x-2 y=10$
Form: $\qquad$ 7) $y-4=\frac{2}{3}(x+5) \quad$ Form: $\qquad$

| $x$ | $y$ |
| :--- | :--- |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

x-int:


| $X$ | $y$ |
| :--- | :--- |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |


$y$-int:
y - int:

Graph and shade the linear inequalities. (Hint: Double-check whether you want a solid or a dashed line!)
8) $y>-3 x+5$
9) $2 x-4 y<12$



For questions $10-12$, determine whether the lines through each pair of points are parallel, perpendicular, or neither.
10) $(-1,-3)$ and $(2,-8)$; $(8,-7)$ and $(9,10)$
11) $(0,-4)$ and $(5,-1)$; $(-6,8)$ and $(3,-7)$
12) $(5,4)$ and (9,7); (-6,0) and (-2,3)

14a) Write the equation of the line passing through $(4,-7)$ and parallel to the line whose equation is $3 x+y=9$. You may write the equation in any form (i.e. slope-intercept, point-slope, standard form, but point-slope is recommended).

14b) Change the word "parallel" to "perpendicular" in the above problem, and complete it again.

15a) Write the equation of the line passing through ( $4,-7$ ) and parallel to the line whose equation is $3 x+4 y=9$. You may write the equation in any form (i.e. slope-intercept, point-slope, standard form).

15b) Change the word "parallel" to "perpendicular" in the above problem, and complete it again.

