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Worksheet 5.6-The Standard Form of a Linear Equation (textbook pages 308-314)

## LEVEL 1

Write the equation in standard form with integer coefficients. Show your work.

1) $2 x-y-8=0$
2) $y=5-3 x$
3) $x-4=0$
4) $\frac{1}{4} x-2 y=-3$
5) $0.6 x=2.1 y+1.8$
6) $3 y=12$

## LEVEL 2

Write the standard form of the equation of the line that passes through the given point and has the given slope. Show your work.
7) $(4,3) ; m=2$
8) $(-2,4) ; m=-6$
9) $(6,-8) ; m=\frac{1}{3}$

Write the standard form of the equation of the line that passes through the given points. Show your work.
10) $(5,8)$ and $(3,2)$
11) $(-4,-5)$ and $(-2,5)$
12) $(-2,5)$ and $(3,-10)$

## LEVEL 3

Write the standard form of the equation of the horizontal and vertical lines that pass through the given point.
13) $(3,-4)$
14) $(5,1)$
15) (0, -4)

## LEVEL 4

16) You are in charge of buying the hamburger and boned chicken for a party. You have $\$ 60$ to spend. The hamburger costs $\$ 2$ per pound and boned chicken is $\$ 3$ per pound.
a) Write an equation that represents the different amounts of hamburger, $x$, and chicken, $y$, that you can buy.
b) Rewrite your equation from part a in slope-intercept form.
c) Sketch the graph of the linear equation from $b$ above.

d) Complete the table and label the points from the table on the graph.

| Hamburger (lb), $\boldsymbol{x}$ | 0 | 6 | 12 | 18 | 30 |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Chicken (lb), $\boldsymbol{y}$ |  |  |  |  |  |

