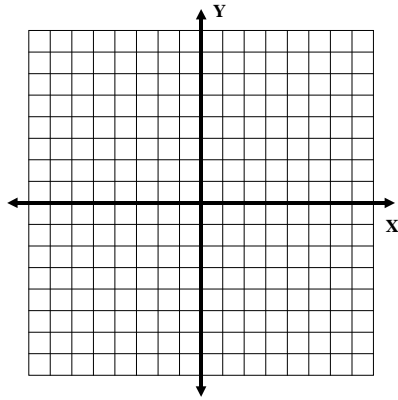


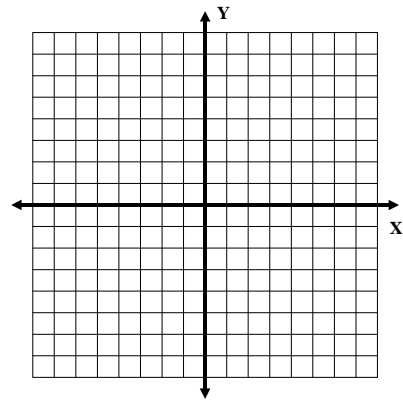
Equations, Graphs, & Sequences

[1] Graph the line for each equation in two variables, using any method discussed in Unit 9.

[1a] $y = \frac{3}{5}x - 3$



[1b] $2x + 3y = 12$



[2] Use the generating formulas given below to determine the first five terms of each sequence. Then apply the formula to determine the 100th term.

[2a] $a_n = \frac{n(n+3)}{2}$ _____, _____, _____, _____, _____

$a_{100} =$ _____

[2b] $a_n = (n+2)(n+3)$ _____, _____, _____, _____, _____

$a_{100} =$ _____

[3] Use the appropriate generating formula to determine the first six terms of each sequence. Then determine whether the sequence has a limit, and if so what it is.

[3a] Arithmetic, $a_1 = 5$, $d = 4$

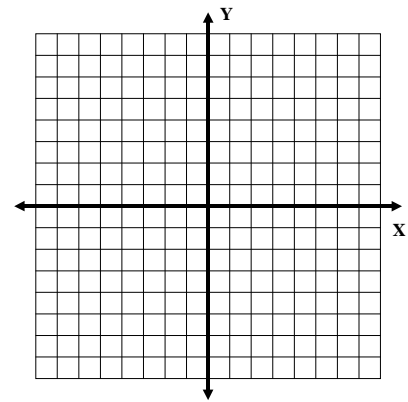
[3b] Geometric, $a_1 = 64$, $r = \frac{3}{4}$

[3c] $a_n = \frac{n+1}{2n}$

[4] Use slope-intercept form $y = mx + b$ for the following.

[4a] Convert $4y + 3x = 12$ into slope-intercept form.

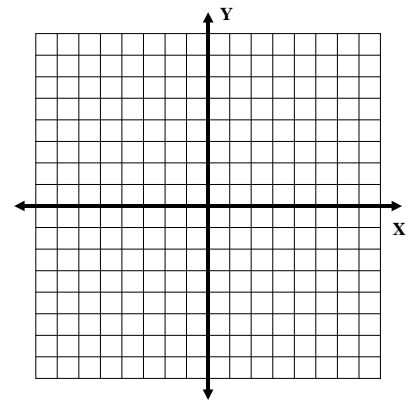
[4b] Graph this equation, and label the coordinates of two solutions.



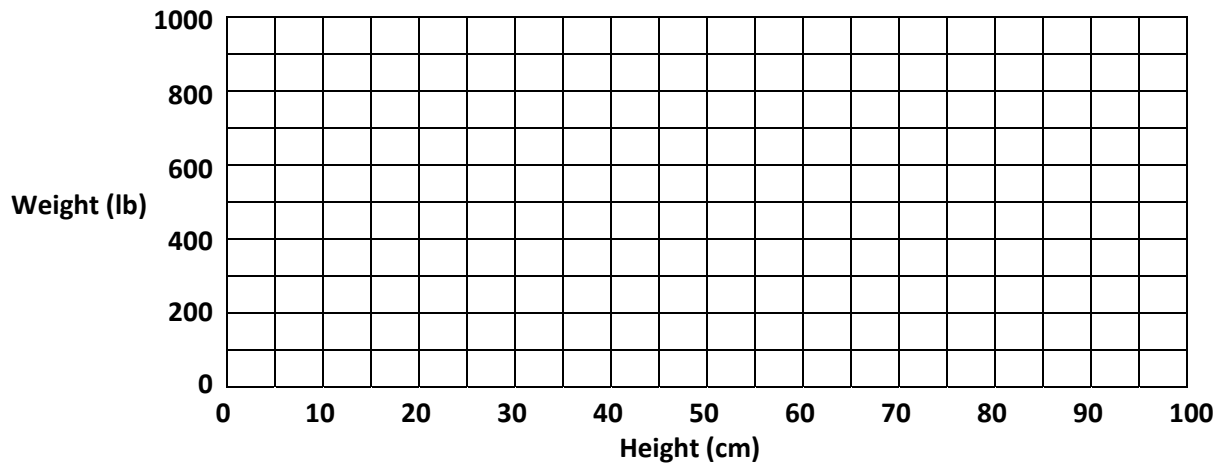
[5] Use point-slope form $y - y_1 = m(x - x_1)$ for the following.

[5a] A line has a slope of -2 and passes through the point (-4, 6). Write the equation for this line in point-slope form.

[5b] Graph this equation, and label the coordinates of two solutions.



[6] Answer the following, involving a scatterplot comparing the height and weight of pigs.



[6a] Plot these data points on this grid, then determine the mean coordinate. Round your mean coordinate to the nearest gridline crossing, then plot this point.

Height	30	25	55	75	90	70	10	45	80	45	95	30
Weight	200	225	600	675	850	750	175	525	800	450	900	325

[6b] Determine a line of best fit, and label the coordinates of a second point.

[6c] Use these two points to determine the slope of this line, then use it and the mean coordinate to determine an equation for this line in point-slope form.