Math (Technical & Scientific)

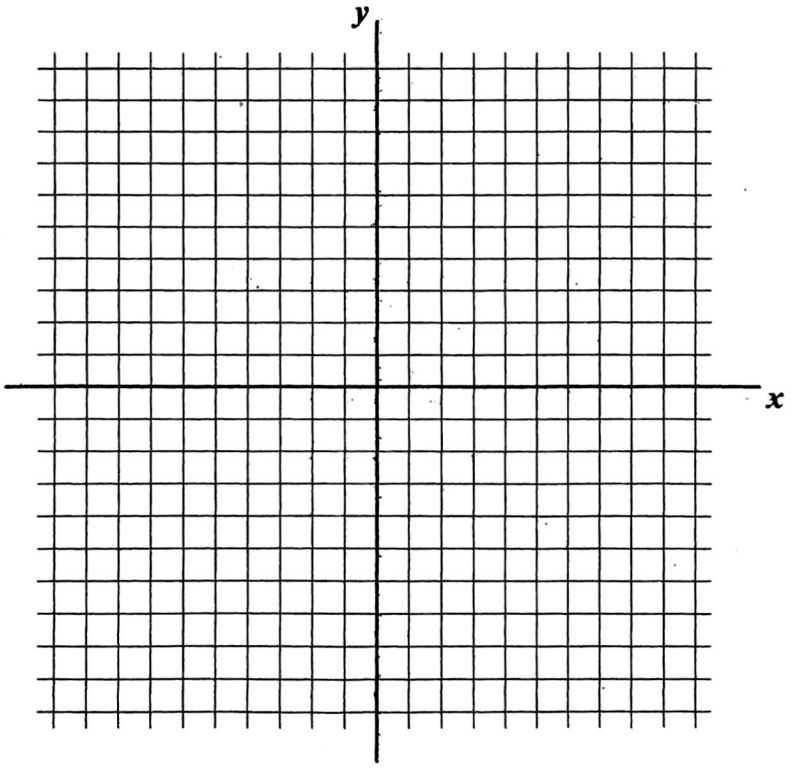
Graphing Linear Equations

Name: _____

1) For each of the following equations, find the slope, the y-intercept and the x-intercept.

Line	Equation	Slope	y-intercept	x-intercept
ℓ_1	$y = 2x - 6$			
ℓ_2	$3x - 4y + 24 = 0$			
ℓ_3	$3x + 2y + 9 = 0$			
ℓ_4	$\frac{x}{6} + \frac{y}{8} = 1$			

2) Illustrate each of the above lines on the Cartesian plane below *(label the lines)*.



3) Which of the above lines are perpendicular?

Math (Technical & Scientific)

Finding Equations of Lines

Name: _____

1) Find the equation of the line that ...

(i) ... has a slope of 4 and passes through the point (6, 17)

(ii) ... has a slope of -7 and passes through the point $(4, -15)$

(iii) ... has a slope of $\frac{1}{3}$ and passes through the point $(-4, -2)$

(iv) ... passes through the points (3, 50) and (5, 90)

(v) ... passes through the points (6, -9) and (-8, -2)

(vi) ... has x-intercept = 70 and y-intercept = 20

(vii) ... passes through the point (10, 4) and is parallel to the line: $y = 5x + 6$

(viii) ... passes through the point (10, 4) and is perpendicular to the line: $y = 5x + 6$

(ix) ... passes through the origin and is parallel to the line: $6x + 4y + 12 = 0$

(x) ... has x-intercept = 14 and is perpendicular to the line: $7x - 4y + 1 = 0$