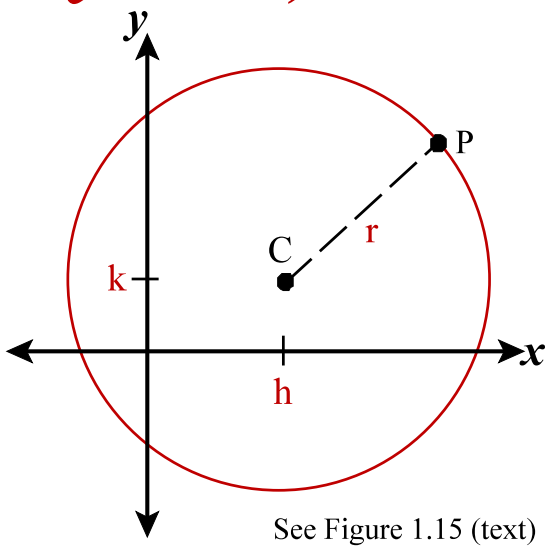
V. Circles (p.29):

A circle with radius "r" and whose center is located at C(h,k) is given by...

$$(x - h)^2 + (y - k)^2 = r^2$$ ☜(standard form)



See Figure 1.15 (text)

VI. Examples (p.35): Exercises #~~28~~,36,56c;50

33

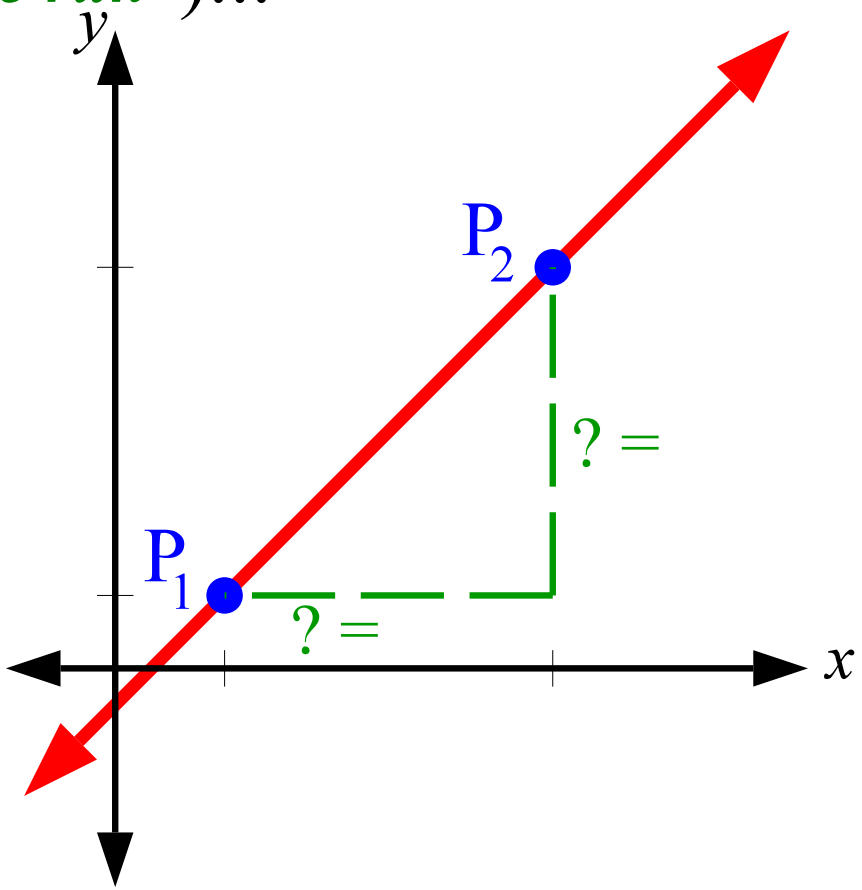
HW: pp.35-36 / Exercises #~~25~~-57 (every other odd)

I. Slope of a Line (p.39): denoted by "m," and is defined as the ratio of the "***vertical change***" to the "***horizontal change***" between any two points (*a.k.a.*, the "***rise over the run***")...

if $P_1(x_1,y_1)$ & $P_2(x_2,y_2)$ are two points on the line, then:

$$m = \frac{y_2 - y_1}{x_2 - x_1}$$

¡muy importante!



II. Linear Equation Forms

1. Slope-intercept form (p.41): $y = mx + b$
2. Standard form (p.31): $Ax + By = C$

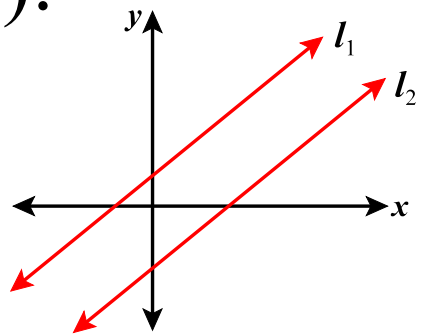
usually A, B & C are integers

3. Point-slope form (p.40): $y - y_1 = m(x - x_1)$

III. Parallel *vs.* Perpendicular (pp.43-44):

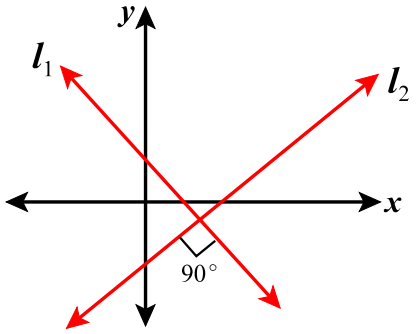
1. $m_1 = m_2 \Leftrightarrow l_1 \parallel l_2$

(*i.e.*, parallel when slopes are equal)



2. $m_1 = -\frac{1}{m_2} \Leftrightarrow l_1 \perp l_2$

(*i.e.*, perpendicular when slopes are negative reciprocals; *or* $m_1 \cdot m_2 = -1$)



IV. Examples (pp.48-49): Exercises #26,54,~~70~~

HW: pp.48-49 / Exercises #7,9,13,17,19,23,25,27-37(odd),45,47,53,57,59,61,~~63,67,71,89,93~~