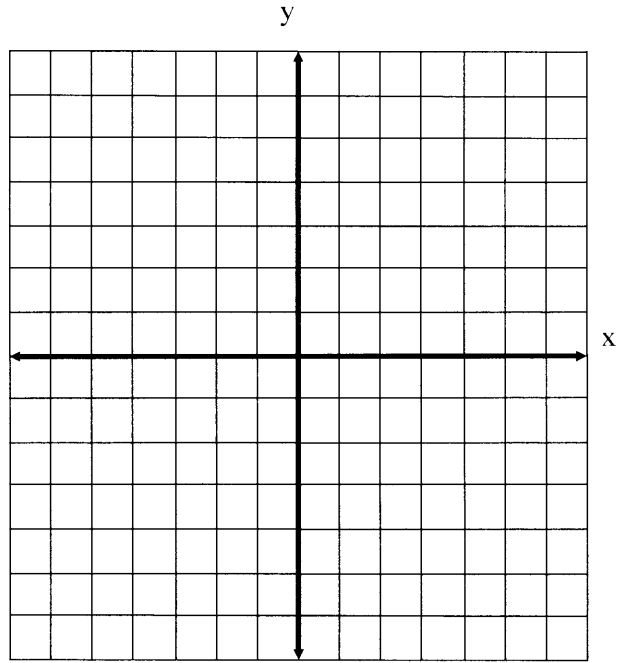

Review Night #2

Section 1. Linear Graphing – 3 Techniques.

1. “Plug and Chug.” Choose several (minimum of 3) x-values, and substitute to determine corresponding y-values. Be sure to show all arithmetic

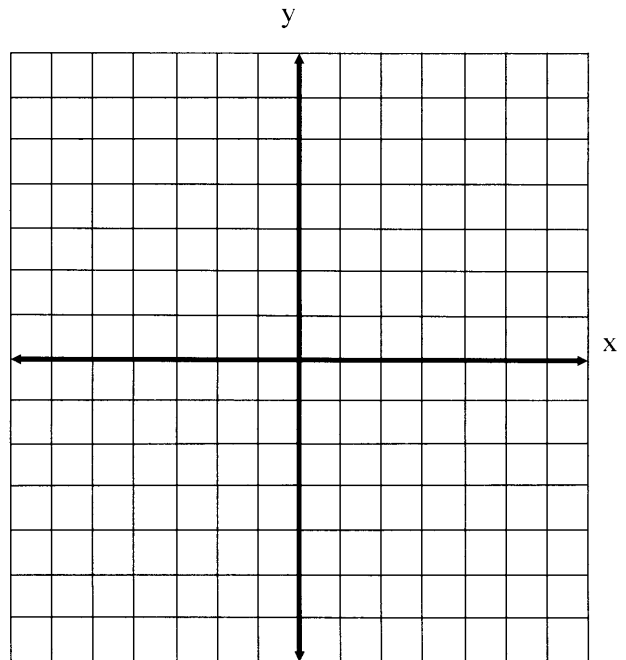
a. $4x - y = 3$

x	y



b. $y - 3x = -2$

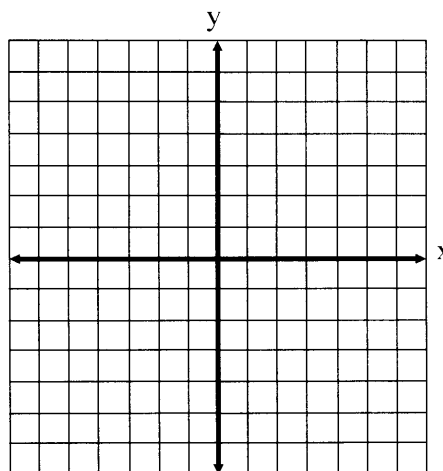
x	y



2. X and Y Intercepts. NOTE: After finding the x and y intercepts for the following graphs, please state the ACTUAL COORDINATES for the points themselves.

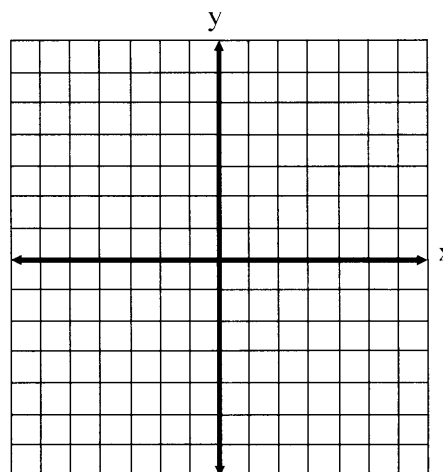
a. $2x - 5y = 10$

Work:



b. $3y - 5x - 15 = 0$

Work:



The Algebra of Intercepts: Find the coordinates for the intercepts:

State the x and y intercepts by their coordinates.

c. $f(x) = 3x + 2$

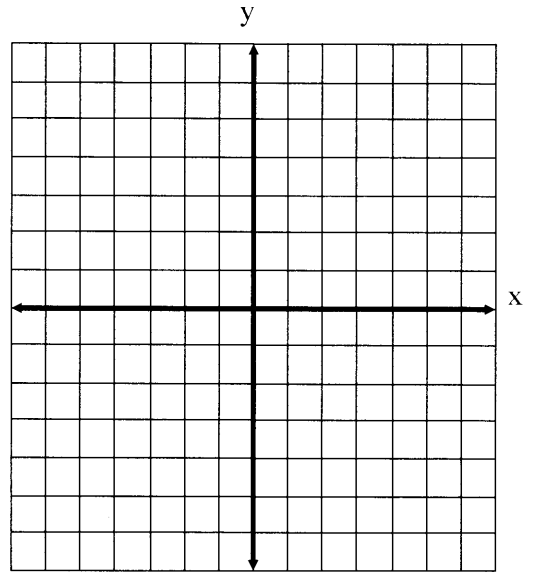
c. _____

d. $f(x) = 15 - 3x$

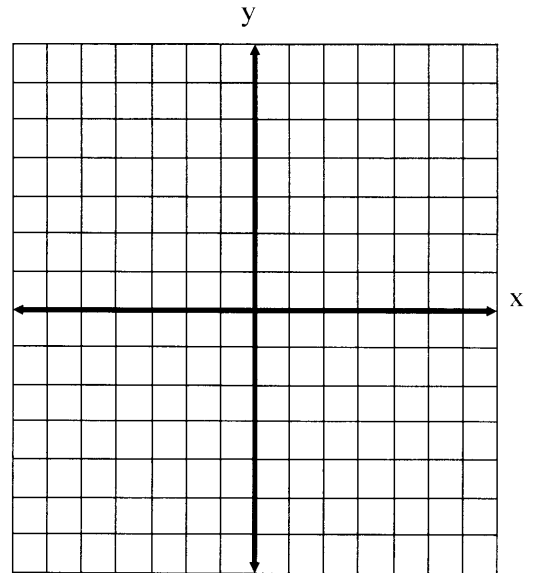
d. _____

Graphing Lines by Slope-Intercept Method: $y = mx + b$.
Name at least 2 points on this line. State the slope and the y-intercept (coordinates).

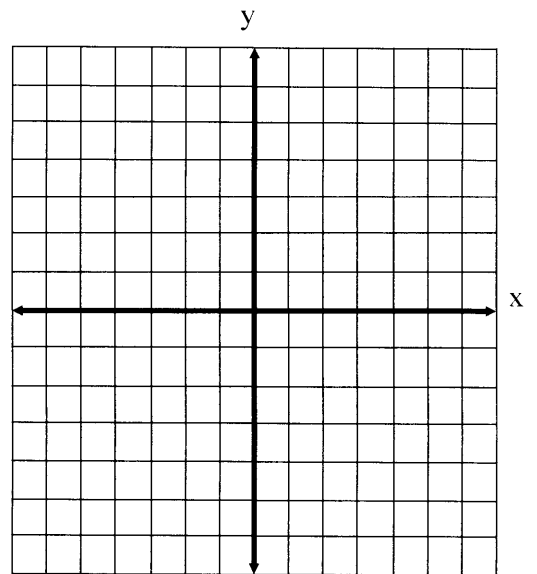
3. $y = -2x + 5$



4. $3x + 2y = 6$



5. $4x - 8y = 16$

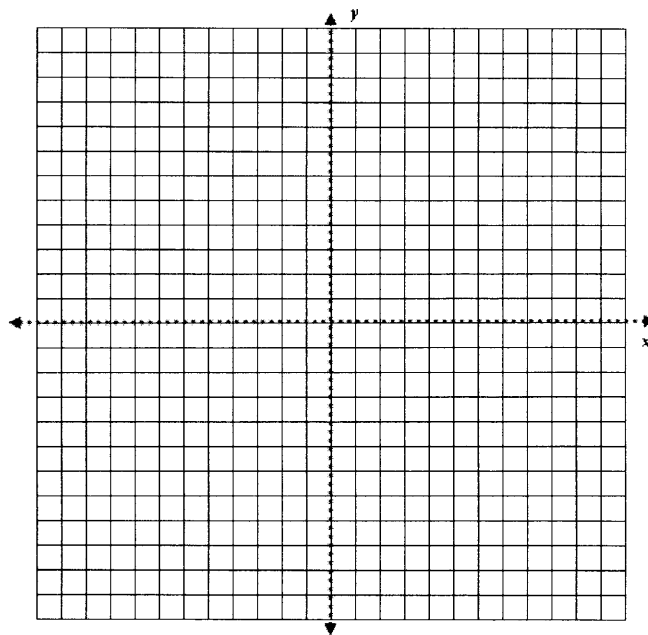
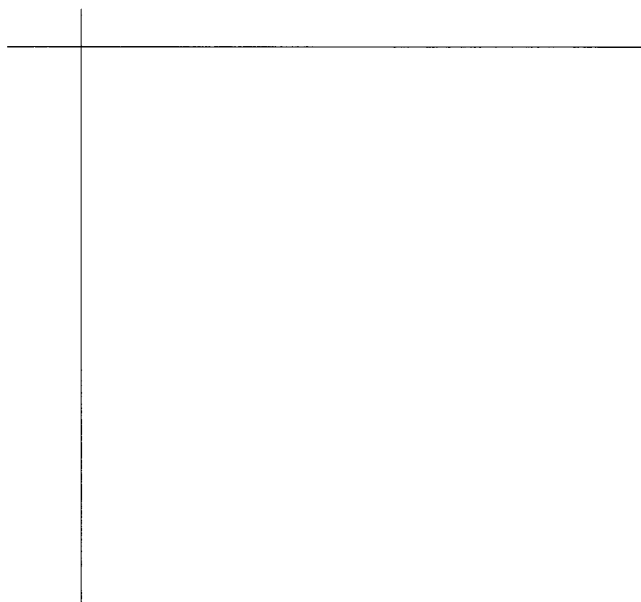


Section 3. Graphing the 2nd Degree (Parabola) Equation on the Coordinate Axes.

1. $y = x^2 + 4x - 5$ Axis of Symmetry: _____ = _____

a = _____ b = _____ c = _____

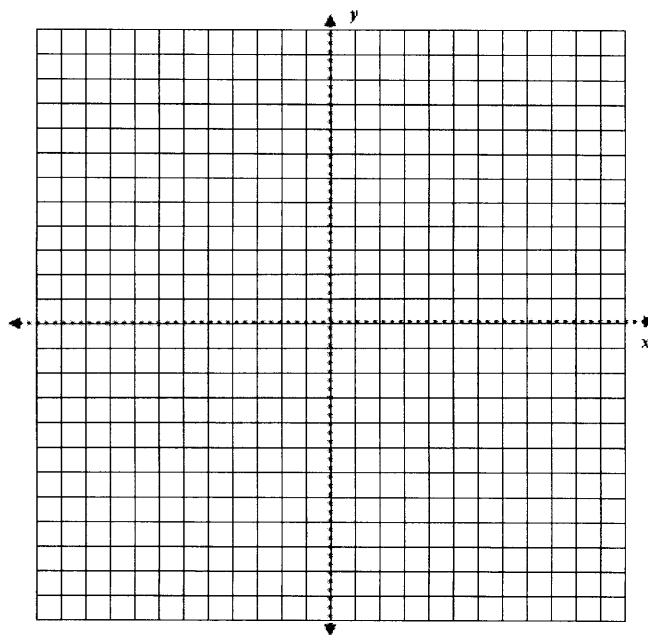
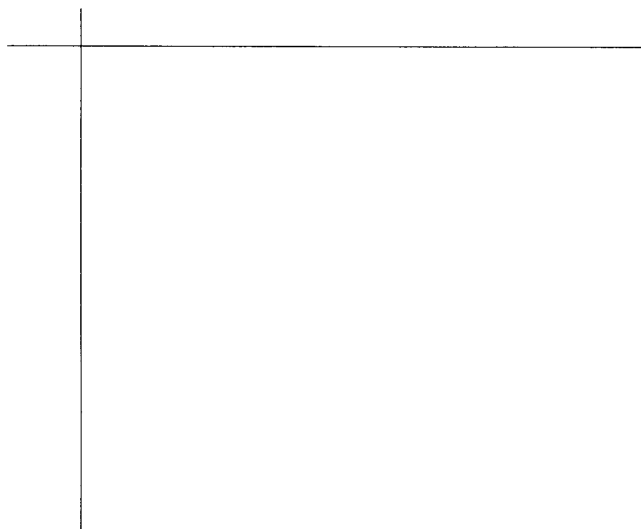
D = _____



2. $y = x^2 - 2x - 3$ Axis of Symmetry: _____ = _____

a = _____ b = _____ c = _____

D = _____

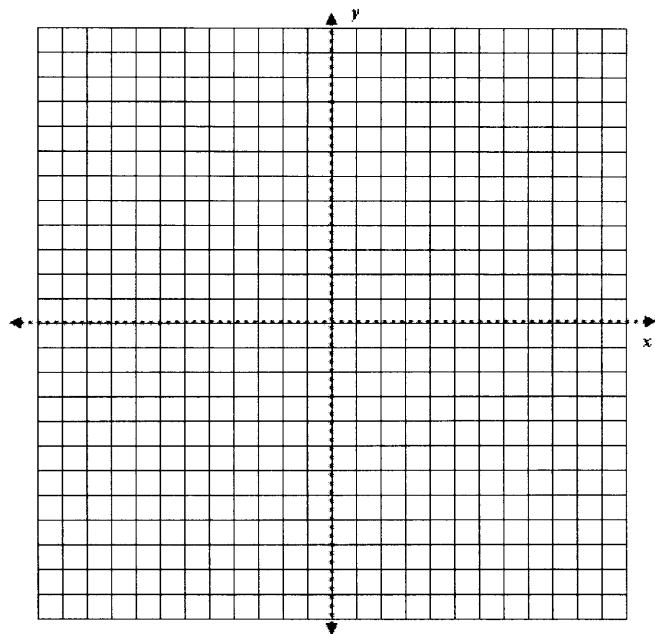
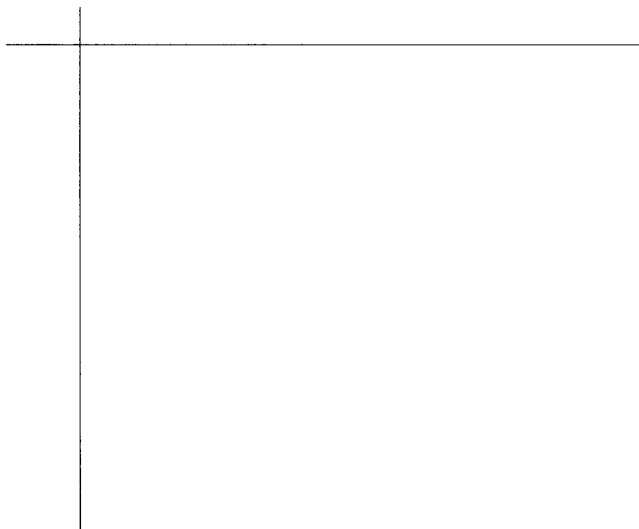


3. $y = -x^2 + 4x - 4$

Axis of Symmetry: _____ = _____

$a =$ _____ $b =$ _____ $c =$ _____

$D =$ _____

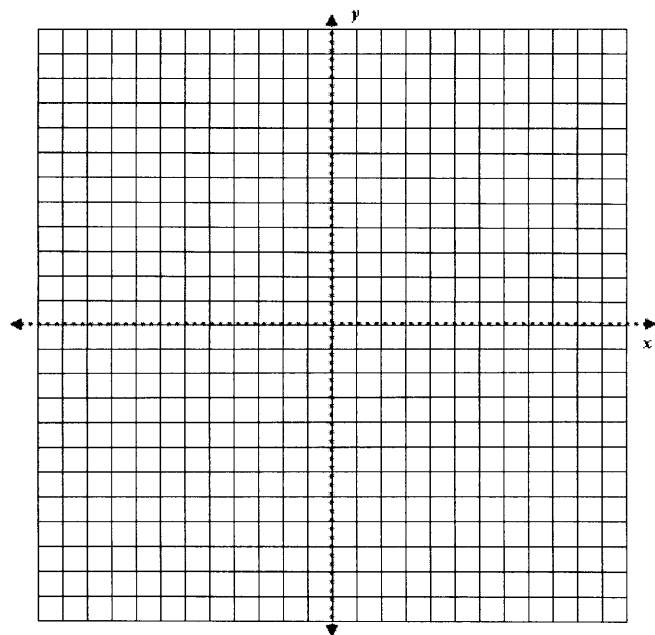
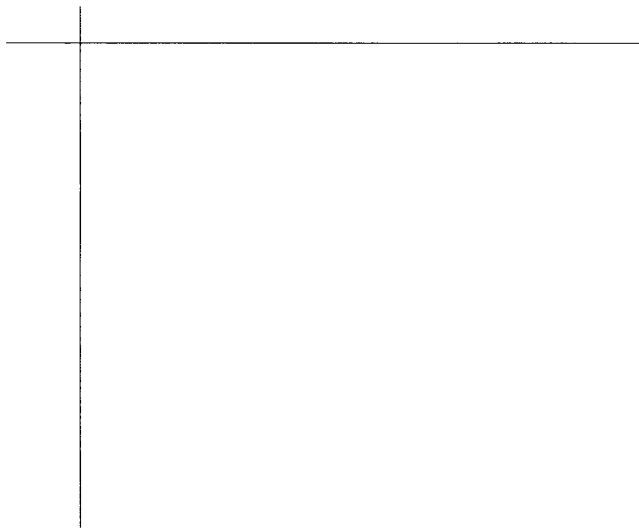


3. $y = -x^2 + 3x + 10$

Axis of Symmetry: _____ = _____

$a =$ _____ $b =$ _____ $c =$ _____

$D =$ _____



Section 4. Multiplication and Division of Fractions

1. Reduce: $\frac{x^2 + 5x}{x^2 - 25}$

2. Reduce: $\frac{x^2 - 2x - 3}{x^2 + 2x - 15}$

3. Simplify: $\frac{14x^3y^2}{x^2 - 5x} \cdot \frac{10x - 50}{21x^2y}$

4. Divide: $\frac{(x - 9)^2}{x^2 - 81} \div \frac{10x - 90}{5x + 45}$

Write in Proper Scientific Notation:

5. 125.4×10^{-5} _____

6. 0.0453×10^6 _____

Simplify: Take Your Time.

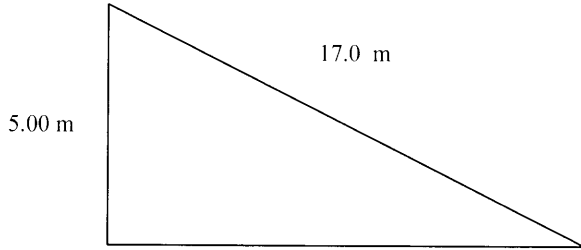
7. $\frac{14.25 \times 10^9}{(1.35 \times 10^4)(5.30 \times 10^{-2})}$

8. $\frac{(5.25 \times 10^3)(4.25 \times 10^{-7})}{(5.70 \times 10^{-10})}$

Resolve the Following: Use an Acceptable Technique. All answers need to be in proper significant digits.

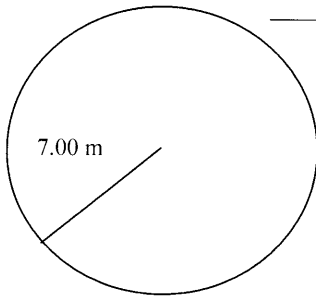
1. Find the perimeter for the right triangle.

1. _____

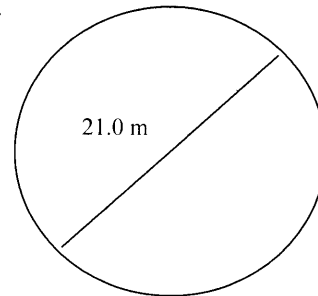


2. Find the Circumference for the following circles. Write the formula that you use on the line provided.

a. _____

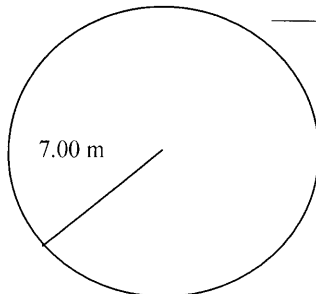


b. _____

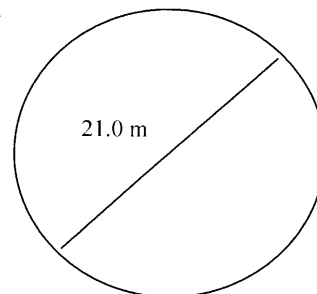


3. Find the Area for the following circles. Write the formula that you use on the line provided.

a. _____

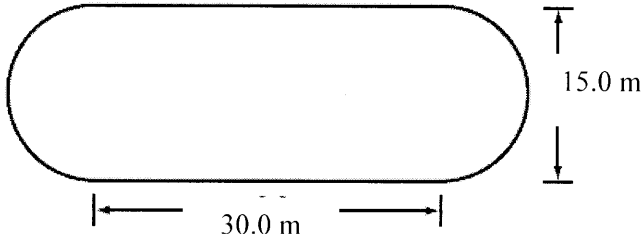


b. _____

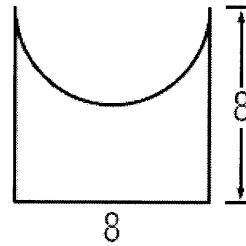


4. Find the Area for the following figures. Write the formula that you use on the line provided.

a.



b.



Variation Section.

Formulas in Play:

Varies Directly:

Varies Indirectly:

Varies Directly As Square:

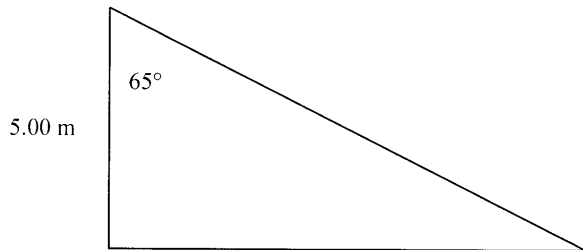
Varies Indirectly as Square:

- The time t that it takes to travel a fixed distance varies inversely as the rate r at which one travels. Express t as a function of r . Solve for the value of the constant k when $t = 4$ and $r = 55$. Find the value of t when $r = 45$.
- The length L of a pendulum varies directly as the square of its period T . Express L as a function of T . Solve for the value of the constant k when $L = 1.0$ m and $T = 2.0$ sec. Find the value length of the pendulum when $T = 2.0$ sec.
- The electrical resistance R of a wire varies directly as the length L of the wire. Express R as a function of L , if $R = 1.5 \Omega$ when $L = 75$ m. Find the resistance of a similar wire whose length is 80 m.

Resolve the Following: Use an Acceptable Technique. All answers need to be in proper significant digits.

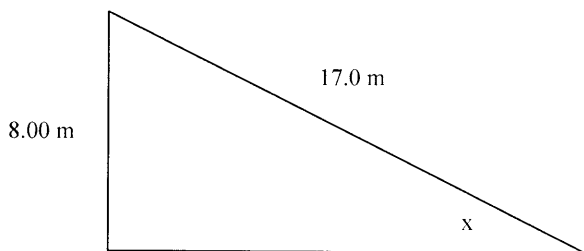
4. Find the area for the right triangle.

4. _____



5. Find the measure of the indicated angle.

5. _____



6. Given $\triangle ABC \sim \triangle AEF$, and that $\overline{AD} = 8.00$, $\overline{DB} = 4.00$, $\overline{AC} = 18.00$, and $\overline{DE} = 6.00$. $\angle A = 65^\circ$, $\angle ABC = 75^\circ$, find x and y .

