

## Final Examination – Monday, Dec. 10<sup>th</sup> (4:10p.m. – 6:10p.m.)

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you will need to know these two **types** of problems...

**Problem #1:** Solve the (linear) system of equations by graphing. Be sure to label the solution.

$$2x - y = 2$$

$$y = \frac{2}{3}x + 2$$

**Problem #2:** Solve/graph the (linear) inequality,  $2x - 3y < 0$

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**Exam 1:** geometry (area & perimeter/circumference) formulas & **percent**; **distributive property**; solve linear equations & inequalities in one variable  
(slope)  $m = \frac{y_2 - y_1}{x_2 - x_1}$ ,  $y = mx + b$  &  $Ax + By = C$ ; graph linear equations & inequalities in two variables;

**Exam 2:** solve a system of linear equations by graphing, substitution and/or elimination methods; exponent properties (including scientific notation) & factoring polynomials; simplify exponential & polynomial expressions; solve polynomial equations

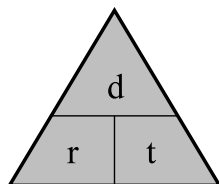
**Exam 3:**  $\pm$  rational expressions requires a common denominator (**LCD**); solve rational equations; simplify radical expressions (*i.e.*, square/cube roots); solve radical equations; direct vs inverse variation; complex numbers ( $\div$  requires the conjugate of “ $a \pm bi$ ”); simplify complex number expressions;  $i = \sqrt{-1} \Rightarrow i^2 = -1$

**Chapter 9:** graph a quadratic equation:  $y = ax^2 + bx + c$   
identify Vertex, any  $x$ - and/or  $y$ -intercepts  
quadratic formula: if  $ax^2 + bx + c = 0$ , then

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

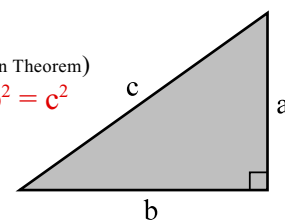
Other formulas to know...

$$I = P \cdot r \cdot t,$$



(Pythagorean Theorem)

$$a^2 + b^2 = c^2$$



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The Final Exam consists of 23 problems (**five** of which are **word problems**). Be sure to bring a calculator and a straight-edge. Pencil and eraser are recommended (although you may use pen at your own risk of personal peril).