Topics on the Final Exam

| TOPIC | Yes | No |
| :---: | :---: | :---: |
| ANALYTIC GEOMETRY |  |  |
| DISTANCE between two points |  |  |
| MIDPOINT between two points or ENDPOINT given midpoint |  |  |
| DIVISION POINT given RATIO or FRACTION |  |  |
|  |  |  |
| LINEAR FUNCTIONS |  |  |
| Find the SLOPE of a line |  |  |
| Write an equation in STANDARD ( $\mathrm{y}=\mathrm{ax}+\mathrm{b}$ ) form (... get ' y ' by itself) |  |  |
| Equation of a line given the SLOPE and a POINT |  |  |
| Equation of a line given TWO POINTS |  |  |
| X-intercepts and Y-intercepts |  |  |
| Equation of a line PARALLEL to a given line (... SAME 'a') |  |  |
| Equation of a line PERPENDICULAR to a given line (... N.R.S.) |  |  |
| How to compare rules and determine the number of solutions in a system (parallel $\rightarrow 0$ solutions; coincident (same line) $\rightarrow$ infinite solutions; anything else $\rightarrow 1$ ) |  |  |
| How to translate a story into a SYSTEM OF RELATIONS (make the equations) |  |  |
| Solve a system of equations and graph it. |  |  |
|  |  |  |
| TRIGONOMETRY |  |  |
| Find an ANGLE or SIDE using TRIGONOMETRIC RATIOS (SIN, COS, TAN) |  |  |
| Find an ANGLE or SIDE using SINE LAW |  |  |
| Find the measure of an OBTUSE angle (OBTUSE = 180-ACUTE) |  |  |
| How to find the AREA OF A TRIANGLE- all three methods: |  |  |
| - General formula (A= base x height $/ 2)$ |  |  |
| - Hero's formula $A=\sqrt{s(s-a)(s-b)(s-c)}$ |  |  |
| - Trigonometric formula $A=\frac{a \cdot b \cdot \sin C}{2}$ |  |  |
|  |  |  |
| TRIANGLES, ISOMETRY AND SIMILITUDE |  |  |
| PYTHAGOREAN THEOREM ( $\left.\mathbf{a}^{2}+\mathbf{b}^{\mathbf{2}}=\mathbf{c}^{\mathbf{2}}\right)$ |  |  |
| Angle relationships with parallel lines and transversals (opposites, alt. int,, etc) |  |  |
| Proving that two triangles are CONGRUENT (SSS, SAS and ASA) |  |  |
| Proving that two triangles are SIMILAR (SSS, SAS and AA) |  |  |
| Metric Relations |  |  |

