Twelve topics

Geo students
Below is a self-guided marathon regents review course. It covers the 12 topics that are essential to performing well on the regents exam. The review course has three components;

- the **pre-assessment** component, which checks your mastery level on that topic
- the **lesson** component, which is a refresher on the topic that we covered in class,
- the **post-assessment** component, which is a way for you (and me) to see how much you've learned and mastered after the refresher

Mastery is our aim.
What constitutes mastery? If you are able to achieve *at least* a 90% on *each* of the topics below, that constitutes mastery.

How does the course work?

1) You start off by taking a pre-assessment Castle Learning assignment on the topic below. If you score a 90% *or above*, you've clearly achieved mastery in this topic and have retained most of what you were taught in class. You can skip the lessons and practice and go on to the next pre-assessment. Continue the process until you complete all 12 topics. If you score *below* a 90%, you have some work to do. You need to click on the links below related to that topic, and follow the lessons on mathbits *paying close attention to the lesson*. If you simply skim the material you'll be disappointed with your post-assessment results.
2) Once you've completed the lesson, do some of the practice problems in each set *before* you complete the second assessment on that same topic.

So in other words you have two chances to demonstrate mastery.

Keep in mind that you *cannot* retake a Castle Learning assessment once you complete it. The grade you achieve on these assessments will factored into your overall grade for marking period IV.

I. Lines

➢ Take the castle learning pre-assessment 1: Geometry: Part 1: Parallel Lines-Pre Assessment

a) Angles and parallel lines
b) Linear Pair - Supplementary/Complementary angles
c) Practice with parallel lines prior to assessment

➢ Take the Castle Learning post-Assessment 1: Geometry: Part 1: Parallel Lines-Post Assessment

II. Coordinate Geometry

➢ Take the castle learning pre-assessment 2: Geometry: Part 2: Coordinate Geo.-Pre Assessment

a) Slope and the equation of a line
b) Midpoint Formula
c) Distance Formula
d) Developing Coordinate proofs
e) Practice with midpoint formula

f) Practice with distance formula
g) Practice with proofs in coordinate geometry

➢ Take the castle learning post-assessment 2: Geometry: Part 2: Coordinate Geo.-Post Assessment

III. **Quadrilaterals and other polygons**

➢ Take the castle learning pre-assessment 3: Geometry: Part 3: Quadrilaterals-Post Assessment

a) Knowing the Quadrilateral Family
b) Properties of Parallelograms - Proving a quadrilateral is a parallelogram
c) Properties of rectangles, rhombuses, squares - Proving a quadrilateral is a rectangle, rhombus or square
d) Properties of Trapezoids - Proving a quadrilateral is a trapezoid
e) Sample problems involving quadrilaterals
f) Numerical practice with quadrilaterals
g) Algebraic practice with quadrilaterals
h) Applications applying properties of quadrilaterals
i) Proof practice with quadrilaterals

➢ Take the castle learning post-assessment 3: Geometry: Part 3: Quadrilaterals-Post Assessment

IV. **Transformation Geometry**

➢ Take the castle learning pre-assessment 4: Geometry: Part 4: Transf. Geometry-Pre Assessment

a) Point - Line - Rotational symmetry
b) Reflections
c) Translations
d) Dilations
e) Rotations
f) Composition of Transformations
g) Practice with symmetry
h) Practice with reflections
i) Practice with translations
j) Practice with rotations
k) Practice compositions of transformations

➢ Take the castle learning post-assessment 4: Geometry: Part 4: Transf. Geometry-Post Assessment

Soon to be posted:

V. Triangle Theorems
VI. Triangle Congruence
VII. Circle Geometry

VIII. Similar Polygons
IX. Equations of a Circle
X. Area of 2D Figures (Polygons)
XI. Logic
XII. Solid Geometry (volume)