

Study Guide for Exam 3

Overall, make sure you understand the topics and problems below and all homework problems.

Measurement

1. You need to be able to do conversions in the metric system without being given the relationships. Be able to do other conversions when a relationship is provided.
2. Know and be able to prove area formulas for a rectangle, parallelogram, triangle, trapezoid, and circle.
3. Understand the Pythagorean theorem and be able to apply it in problems.
4. Know and be able to prove the surface area formulas for a right prism, right cylinder, right regular pyramid, and right circular cone. Know the surface area formula for a circle.
5. Know the volume formulas for a prism, cylinder, pyramid, and sphere.
6. Understand the definition of “similar figures”. Know how to identify the scalar fact and use it to compute length, area, and volume measurements.

Rigid Motions and Similarity Transformations

1. Know the definitions of “transformation of the plane” and “rigid motion”.
2. Be able to use and explain how to use each of the four transformations of the plane which are slide/translation, turn/rotation, reflection, and glide.
3. Understand the theorem called “Classification of General Rigid Motions”.
4. Be able to perform and explain a dilation with scale factor k . Understand when a transformation is a similarity transformation.
5. Be able to define and identify “similar figures”.

Exercises

Work the Chapter Test on pages 814-816 in your textbook. Exclude problems 4, 8, 10, and 13.