

Geometric Formulas for the MATH 116 Exams

I. Students should know (or have on their notecard):

A. Perimeter as sum of side lengths (possibly arclengths)

B. circumference of a circle

C. Areas of

1. rectangles (given base and height)
2. triangles (given base and height),
3. circles (given radius),
4. trapezoids (given bases and height),
5. thin annuli (circumference times thickness)

D. Volumes of

1. boxes
2. cylinders
3. washers
4. cylindrical shells

E. Pythagorean Theorem and Distance Formula

F. Similar Triangles

II. Formulas that would be provided if needed (very far from an exhaustive list):

A. Areas for

1. equilateral triangles (given side length)
2. quadrilaterals other than rectangles and trapezoids (may need to set up integrals for these quantities)

B. Volumes of

1. spheres
2. cones (may need to set up integrals for these quantities)

C. Surface Areas of spheres and cones