North Carolina Testing Program
Mathematics End-of-Grade Tests Grades 3-8
Geometry Formulas Students Need to Know and Understand
(See Caution Below)

From the North Carolina 2003 Mathematics Standard Course of Study (SCS):

Grade	Objective	Relationship/Formula
4	2.01, 2.02	Area of rectangles
5	3.04	Sum of measures of interior angles for triangles.
6	2.02	Area of a triangle, given base and height. Circumference and area of circles given radius or diameter.
7	2.02	Volume and surface area of cylinders and prisms.
8	3.02	Pythagorean Theorem.

Caution: In all grades the SCS emphasizes learning by inquiry and problem solving. Formulas should not be presented as rote learning.

Note that students' knowledge and understanding of relationships at each grade level is expected to carry forward.

Other formulas will be provided in the specific questions.

Some problems will require more reasoning than remembering a formula, substituting values, and computing the answer: students may need (1) to use additional steps to find the values needed for formulas, or (2) to understand that a more complicated shape may be decomposed into simpler parts. For example, a trapezoid can be divided into a rectangle and right triangles.