

MATHEMATICS FORMULA SHEET

Below is a Mathematics formula sheet that will be available to students during the test. The formula sheet reflects the mathematical approach included in the Assessment Anchors that are based on the Pennsylvania Core Standards (PCS). The formula sheet is also available in Spanish.

Formulas that you may need to work questions on this test are found below.

You may refer back to this page at any time during the mathematics test.

You may use calculator π or the number 3.14.

2014
Grade 8

Exponential Properties

$$a^m \cdot a^n = a^{m+n}$$

$$(a^m)^n = a^{m \cdot n}$$

$$\frac{a^m}{a^n} = a^{m-n}$$

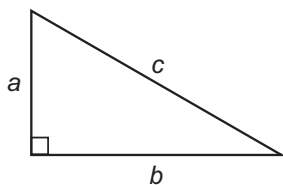
$$a^{-1} = \frac{1}{a}$$

Algebraic Equations

Slope: $m = \frac{y_2 - y_1}{x_2 - x_1}$

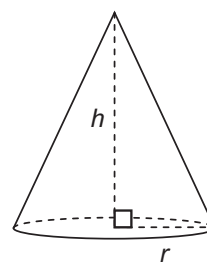
Slope-Intercept Form: $y = mx + b$

Pythagorean Theorem



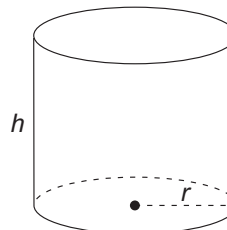
$$a^2 + b^2 = c^2$$

Cone



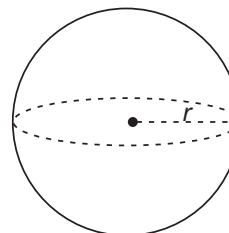
$$V = \frac{1}{3} \pi r^2 h$$

Cylinder



$$V = \pi r^2 h$$

Sphere



$$V = \frac{4}{3} \pi r^3$$