

Ohio Graduation Tests Mathematics Reference Sheet

Information that may be needed to solve problems on the Mathematics Test:

Area Formulas

parallelogram $A = bh$

rectangle $A = lw$

trapezoid $A = \frac{1}{2}h(b_1 + b_2)$

triangle $A = \frac{1}{2}bh$

Circle Formulas

$$C = 2\pi r \quad \pi \approx 3.14 \text{ or } \frac{22}{7}$$

$$A = \pi r^2$$

Combinations

$${}_n C_r = C(n,r) = \frac{n!}{r!(n-r)!}$$

Permutations

$${}_n P_r = P(n,r) = \frac{n!}{(n-r)!}$$

Distance Formula

$$d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$$

Quadratic Formula

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

Volume Formulas

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

cylinder $V = \pi r^2 h$

pyramid $V = \frac{1}{3}Bh$ $B = \text{area of base}$

rectangular prism $V = lwh$

right prism $V = Bh$ $B = \text{area of base}$

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

Trigonometry

$$\sin A = \frac{\text{opposite}}{\text{hypotenuse}}$$

$$\cos A = \frac{\text{adjacent}}{\text{hypotenuse}}$$

$$\tan A = \frac{\text{opposite}}{\text{adjacent}}$$

