Ohio Graduation Tests Mathematics Reference Sheet

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

Area Formulas

parallelogram $\quad A = bh$

rectangle $\quad A = lw$

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

triangle $\quad A = \dfrac{1}{2}bh$

Circle Formulas

$C = 2\pi r \qquad \pi \approx 3.14 \text{ or } \dfrac{22}{7}$

$A = \pi r^2$

Volume Formulas

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

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

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

rectangular prism $\quad V = lwh$

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

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

Combinations

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

Permutations

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

Distance Formula

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

Quadratic Formula

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

Trigonometry

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

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

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