

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

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

$A = \pi r^2$

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

Combinations

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

Permutations

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

Distance Formula

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

Quadratic Formula

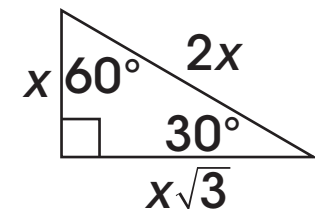
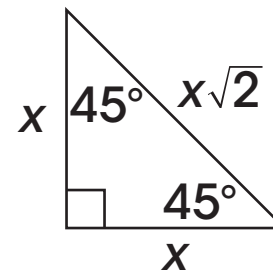
$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

Trigonometry

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

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

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



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