

Massachusetts Comprehensive Assessment System Grade 10 Mathematics Reference Sheet

AREA FORMULAS

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

rectangle $A = bh$

square $A = s^2$

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

CIRCLE FORMULAS

$C = 2\pi r$

$A = \pi r^2$

VOLUME FORMULAS

cube $V = s^3$
(s = length of an edge)

rectangular prism $V = lwh$

OR

$V = Bh$

(B = area of the base)

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

right circular cylinder $V = \pi r^2h$

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

right square pyramid $V = \frac{1}{3}s^2h$

LATERAL SURFACE AREA FORMULAS

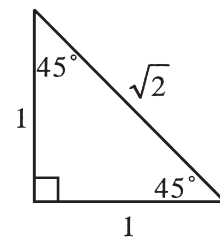
rectangular prism $LA = 2(hw) + 2(lh)$

right circular cylinder $LA = 2\pi rh$

right circular cone $LA = \pi r\ell$

right square pyramid $LA = 2s\ell$

(ℓ = slant height)



TOTAL SURFACE AREA FORMULAS

cube $SA = 6s^2$

rectangular prism $SA = 2(lw) + 2(hw) + 2(lh)$

sphere $SA = 4\pi r^2$

right circular cylinder $SA = 2\pi r^2 + 2\pi rh$

right circular cone $SA = \pi r^2 + \pi r\ell$

right square pyramid $SA = s^2 + 2s\ell$

(ℓ = slant height)

