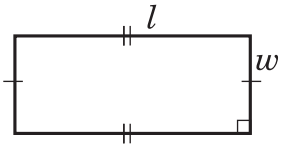
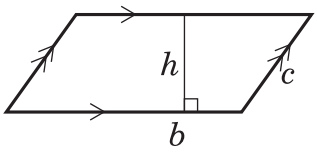
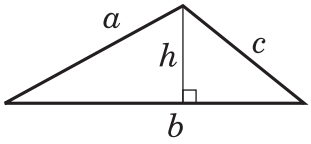
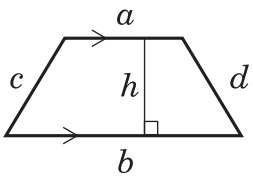
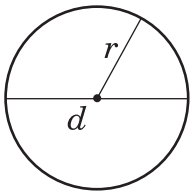
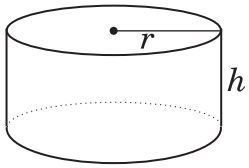
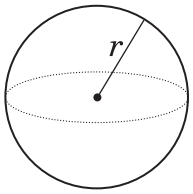
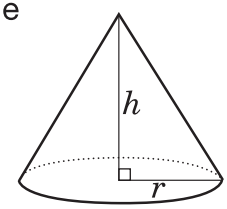
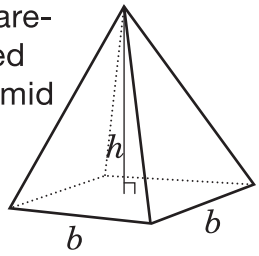
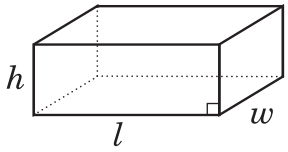
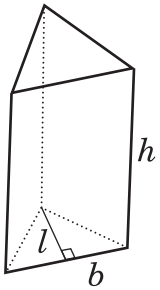
# Formula Sheet

## Grade 9 Applied

| Geometric Figure | Perimeter | Area |
|---|---|---|
| Rectangle   | $P = l + l + w + w$<br>or<br>$P = 2(l + w)$ | $A = lw$ |
| Parallelogram   | $P = b + b + c + c$<br>or<br>$P = 2(b + c)$ | $A = bh$ |
| Triangle   | $P = a + b + c$ | $A = \frac{bh}{2}$<br>or<br>$A = \frac{1}{2}bh$ |
| Trapezoid   | $P = a + b + c + d$ | $A = \frac{(a + b)h}{2}$<br>or<br>$A = \frac{1}{2}(a + b)h$ |
| Circle   | $C = \pi d$<br>or<br>$C = 2\pi r$ | $A = \pi r^2$ |

| Geometric Figure | Volume |
|---|---|
| Cylinder   | $V = (\text{area of base})(\text{height})$<br>$V = \pi r^2 h$ |
| Sphere   | $V = \frac{4}{3}\pi r^3$ or $V = \frac{4\pi r^3}{3}$ |
| Cone   | $V = \frac{(\text{area of base})(\text{height})}{3}$<br>$V = \frac{1}{3}\pi r^2 h$ or $V = \frac{\pi r^2 h}{3}$ |
| Square-based pyramid   | $V = \frac{(\text{area of base})(\text{height})}{3}$<br>$V = \frac{1}{3}b^2 h$ or $V = \frac{b^2 h}{3}$ |
| Rectangular prism   | $V = (\text{area of base})(\text{height})$<br>$V = lwh$ |
| Triangular prism   | $V = (\text{area of base})(\text{height})$<br>$V = \frac{1}{2}blh$ or $V = \frac{blh}{2}$ |