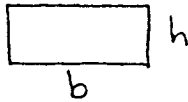


Math 17A

Kouba

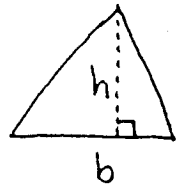
Basic Math Formulas

1. rectangle :



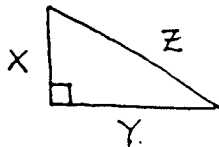
area $A = bh$
perimeter $P = 2b + 2h$

2. triangle :



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

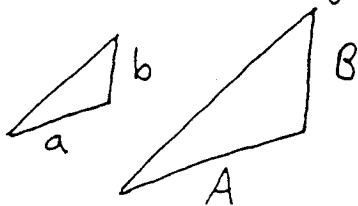
3. right triangle :



Pythagorean Theorem

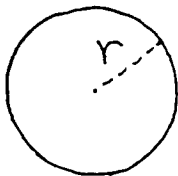
$$x^2 + y^2 = z^2$$

4. similar triangles :



$$\frac{A}{a} = \frac{B}{b} \quad \text{or} \quad \frac{a}{b} = \frac{A}{B}$$

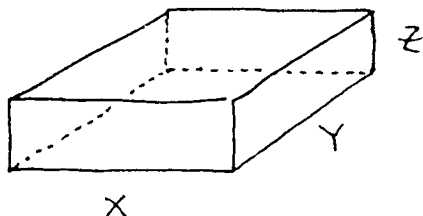
5. circle :



area $A = \pi r^2$

circumference $C = 2\pi r$

6. rectangular solid :

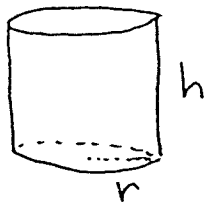


volume $V = xyz$

surface area

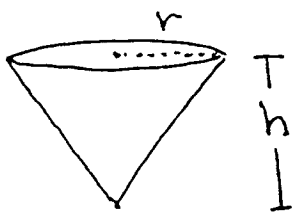
$$S = 2xy + 2yz + 2xz$$

7. circular cylinder: volume $V = \pi r^2 h$



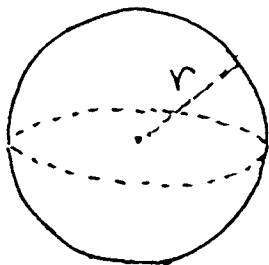
surface area
 $S = 2\pi r^2 + 2\pi r h.$

8. circular cone: volume



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

9. sphere: volume $V = \frac{4}{3} \pi r^3$



surface area

$$S = 4\pi r^2$$

10. A is directly proportional to B:

$$A = k B$$

11. A is inversely proportional to B:

$$A = k \cdot \frac{1}{B}$$