Using Formulas   Solver: _____

#1-6, Use the given formulas to solve the problems (use the π button on your calculator).

Perimeter = 2L+2W   L=length   **Simple Interest =** Prt   P = principle (start $)
                         W= Width   r= interest rate (as a decimal)
                                                                                    t = time (in years)

Volume of a cylinder = $\pi r^2 h$ **Area of a trapezoid** = $\frac{1}{2}(b_1 + b_2)h$ b_1 = length of one base

                         r = radius b_2= length of other base
                         h = height   h = height

1.   A trapezoid 's height is 10 cm. One of its bases is 13 cm and the second base is 5 cm. What is the area of the trapezoid?

2.   A cylinder with a radius of 4.5 ft has a volume of 23 ft^3. What is the height of the cylinder?

3.   Jayden earned $7.20 in her savings account from 2007 to 2009. If her interest rate is 2.25%, how much money did she start with?

4.   Granny's rectangular rose garden is 34 ft around. If the width of the garden is 5 ft, what is the length?

5.   One trapezoid has an area of 50 in^2. If one base is 10 in and the height is 7.5 in. what is the length of the second base?

6.   Hunter earned $262.50 on his mutual fund account over the past *6 months*. If he begin with $17,500, what interest rate has he earned?

#7-10, Use the given formulas to solve the problems. (use the π button on your calculator).

Surface area of cone= $\pi r^2 + \pi r \ell$ Density: $\rho = \frac{m}{V}$
                         r = radius   m = mass
                         ℓ = slant height   V = volume
                                                                                 ρ = Density

7. Find the surface are of a cone with a radius of   **8.** If an object has a density of 15 g/cm^3 and a mass
        4 cm. and a slant height of 11.5 cm.   of 25 g, what is it's volume?

9. Find the slant height of a cone with a surface area of 113.55 cm^2 and a radius of 3.5 cm.

10. A cup of gold colored metal beads was measured to have a mass 425 grams. By water displacement, the volume of the beads was calculated to be 48.0 cm^3. Find the density of beads.

11. The formula predicts the adult height, H, of a boy based on his mother's height, M, and his father's height, F, when all measurements are in inches. $H = \dfrac{M + F + 5}{2}$

a. Jake's father is 73 inches tall. His mother's height is 68 inches. How tall do you predict Jake will be as an adult?

b. Solve the formula for M.

12. In 2005, the federal income tax, T, for a single person with a taxable income, E, between $7,300 and $29,700 was given by   ***T = 730 + 0.15(E-7300)***. If a single person paid $1,500 in taxes, what was that person's earnings?