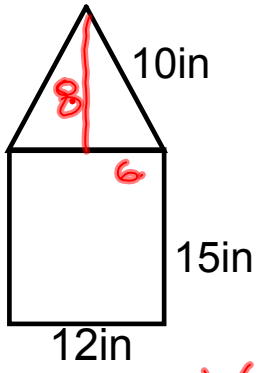
Chapter 11/12 Review

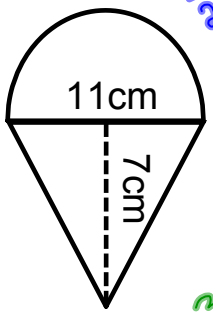
Area, Surface Area, Volume

Find the area of the figures to the nearest hundredth.

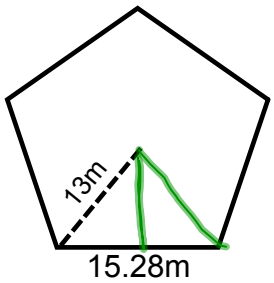


$12(15) + \frac{1}{2}(12)(8)$

$228 in^2$



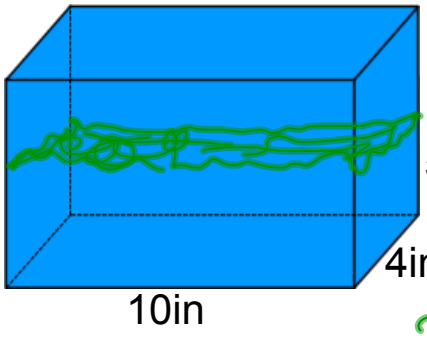
$\frac{1}{2}(11)(7) + \frac{\pi(5.5)^2}{2}$ $86.12 cm^2$



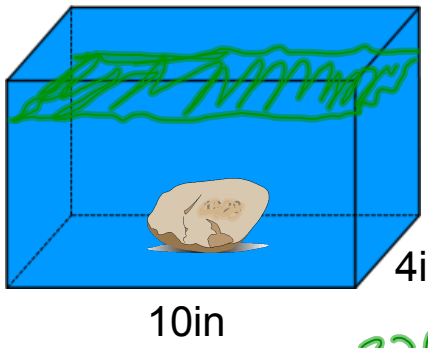
$\frac{1}{2}(15.28)(10.52)(5)$

$401.86 m^2$

What is the volume of the rock



$5 \times 4 \times 10 = 200 in^3$

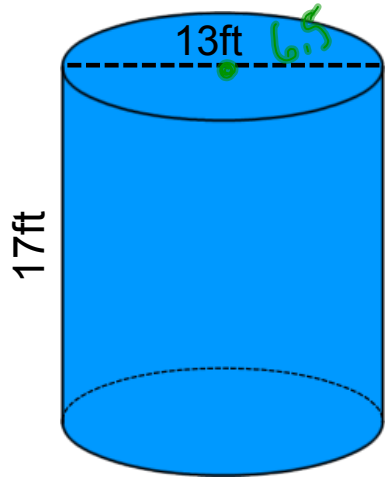


$10 \times 4 \times 8 = 320 in^3$

$320 - 200$

$120 in^3$

Find the surface area and volume



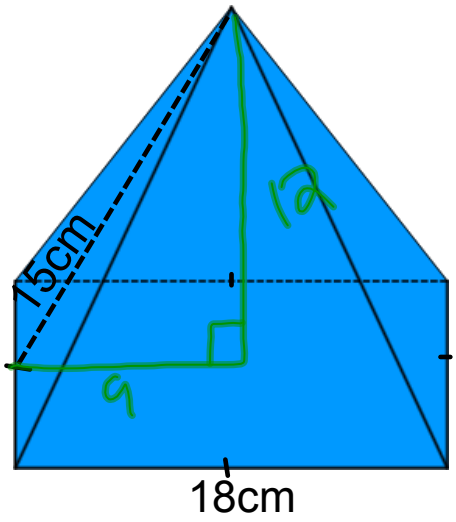
SA: $2\pi(6.5)^2 + 2\pi(6.5)(17)$

$959.76 Ft^2$

Vol: $\pi(6.5)^2(17)$

$2256.45 Ft^3$

Find the surface area and volume:



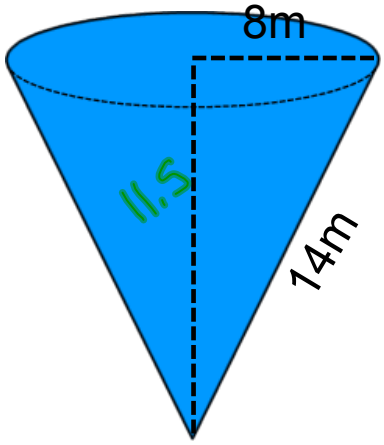
SA: $18^2 + \frac{1}{2}(18 \cdot 4)(15)$

$864\ cm^2$

Vol: $\frac{1}{3}(18^2)(12)$

$1296\ cm^3$

Find the surface area and volume in terms of pi.



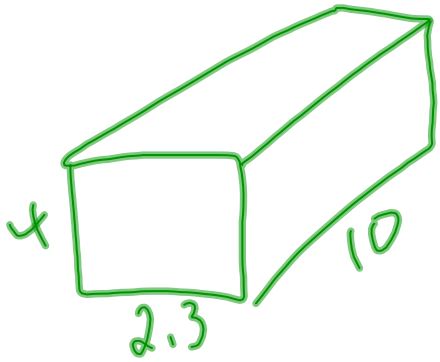
SA: $\pi(8)^2 + \pi(8)(14)$

$176\pi\ m^2$

Vol: $\frac{1}{3}(\pi(8^2))(11.5)$

$245.\overline{3}\pi\ m^3$

Find the surface area and volume of a rectangular prism measuring 2.3mm by 4mm by 10mm.



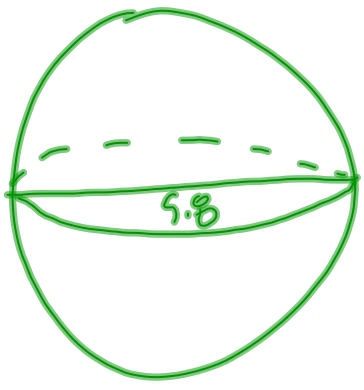
$SA = 2(2.3 \cdot 4) + (12.6 \cdot 10)$

$= 144.4\text{mm}^2$

$Vol = 2.3(4)(10)$

$= 92\text{mm}^3$

Find the surface area and volume of a sphere with diameter 5.8cm



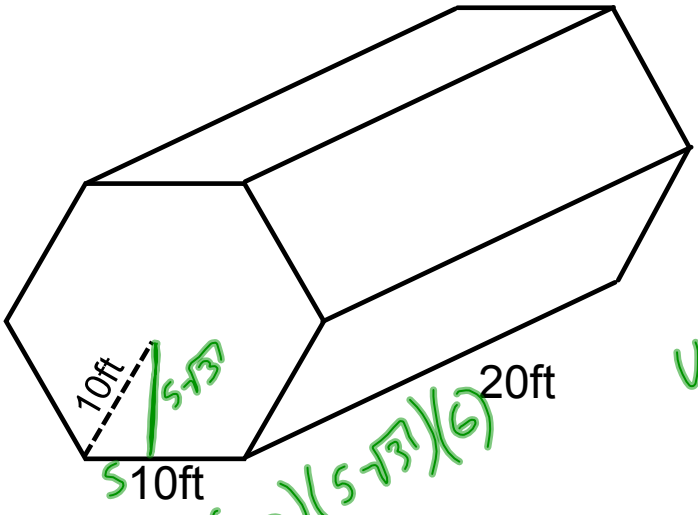
$SA = 4\pi(2.9)^2$

$= 105.68\text{cm}^2$

$Vol = \frac{4}{3}\pi(2.9)^3$

$= 102.16\text{cm}^3$

Find the surface area and volume:



$\frac{1}{2}(10)(5\sqrt{3})(6)$

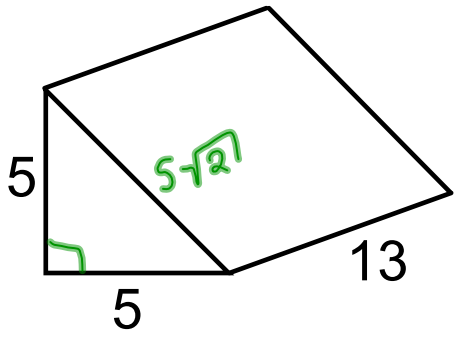
SA: $2(259.81)+(60\cdot20)$

$=1719.62\,ft^2$

Vol: $259.81(20)$

$=5196.2\,ft^3$

Find the surface area and volume:



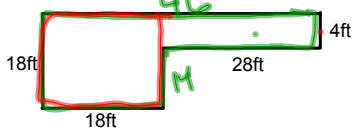
SA: $2(12.5)+18.7(13)$

$=268.1\,units^2$

Vol: $\frac{1}{2}(5)(5)(13)$

$162.5\,units^3$

I want to build a pool that looks like the picture. How much metal will I need for the side walls? If the walls are 4 ft tall how much water will I need to fill the pool? If water is $.25 per cubic inch how much would it cost?



$18+18+14+28+4+46$

128 ft metal

$18^2+(28\cdot4)$

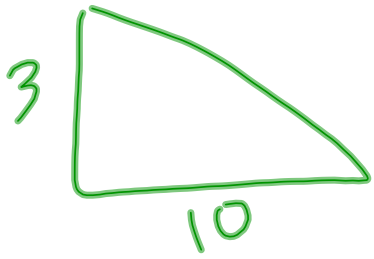
$436(4) = 1744\text{ft}^3$

$1744\text{ft}^3 \left|\frac{12\text{ in}}{1\text{ ft}}\right|\frac{12\text{ in}}{1\text{ ft}}\left|\frac{12\text{ in}}{1\text{ ft}}\right.$

$3013632\text{ in}^3(.25)$

$753,408$

One leg is 3ft and the other leg is 10 ft, what is the hypotenuse?



$3^2+10^2=x^2$

$9+100=x^2$

$x=10.44\text{ft}$