**Answers for Filling and Wrapping Review Sheet**

1. Area of circle = πr2Area = π(4.52)

**Area = 20.25 π in2**

1. C = πd

C = 314

314 = πd

**d = 100 ft**

3a. Surface area means area of all the faces combined. If one face is 49 cm2 and a   
 cube has 6 faces, then the surface area is 49 x 6 = **294 cm2**

3b. V = Ph + 2B

If the Area of one side of a cube is 49, then the length of each side (length,   
 width, and height) is 7 because cubes are made of squares and squares have   
 equal sides.

V = 28 x 7 + 2(49)

**V = 343 cm3**

1. The box is a cube. If the volume is 512, that means that each side is the same. 8 \* 8 \* 8 = 512, so each side is 8.  
     
   SA = Ph + 2B P = 32 h = 8 B = 64  
   SA = 32 x 8 + 2x 64  
   **SA = 384 units2**
2. a. C = πd SA = πdh + 2 π(r2)  
   C = 24 SA = 7.64 x 10 π +2 π(3.822)  
    SA = 76.4 π + 29.18 π  
   24 = πd **SA = 105.58 π cm2**  
   d = 7.64  
   r = ½ d  
   r = 3.82

5b. V = πr2h

V = π(3.822)10 = **146 π cm3**

1. r = 3; h = 7 r = 6; h = 14  
   a. V = (1/3) π(r2)h b. V = (1/3) (62)\*14 π  
    V = (1/3) π(32)7 = 21 π cm3 V = 168 π cm3   
     
   168 π divided by 21 π = 8, so the second cone is **8 times bigger**
2. Area of a circle = πr2
   1. r = 8; h = 12  
      A = π(82) = **64 π ft2**
   2. V = (1/3) πr2h

V = (1/3) π(82)12 = 256 ft3

1. d = 12, so r = 6

V = (4/3) πr3

V = (4/3) π63 = 288 π m3