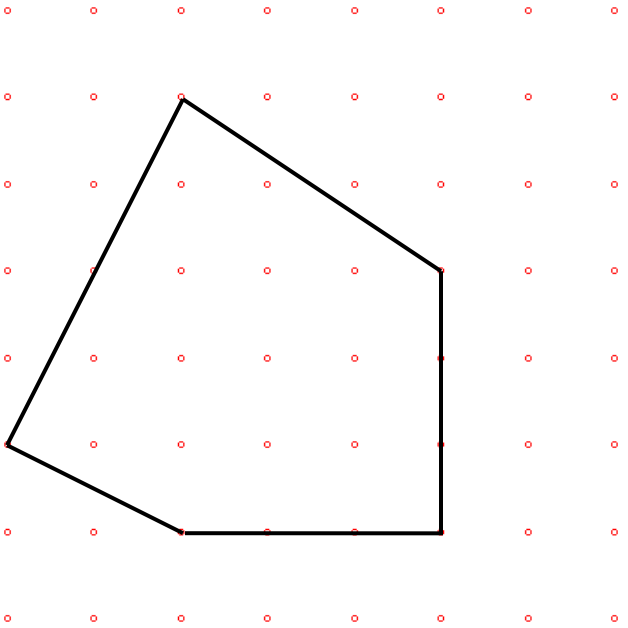
Math 1351 Review #4

1. Find the area of a circle whose circumference is 2.

2. Find the volume of a prism whose base is a rectangle with dimensions 7.2 cm by 3.4 cm and whose height is 5.9 cm.

3. Find the volume of a pyramid whose base is a pentagon with perimeter 17 cm and area of 13 cm^2 and whose height is 12 cm.

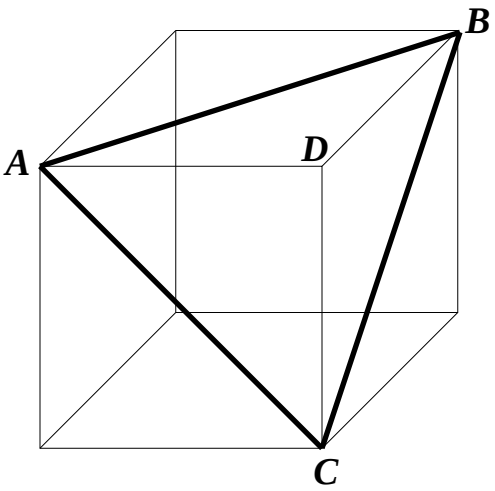
4. Find the exact perimeter of the following figure drawn in a square lattice.



5. Perform the following conversions:

a) 1 yd = ___ in **b)** 8 yd^3 = _____ ft^3 **c)** 543 cm^3 = _____ m^3

6. The cube shown has edges of length $\sqrt{2}$.



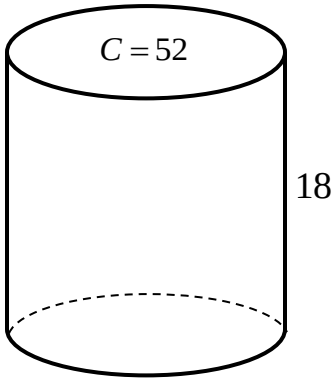
a) Find the area of ΔABC.

b) Find the surface area of pyramid *ABCD*.

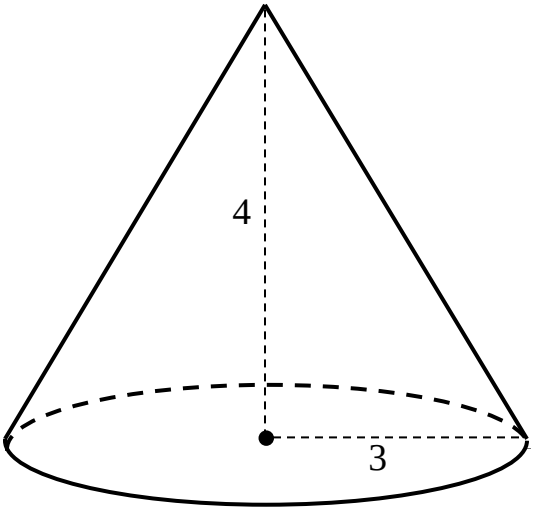
c) Find the volume of pyramid *ABCD*.

7. Find the surface area and volume of the following solids.

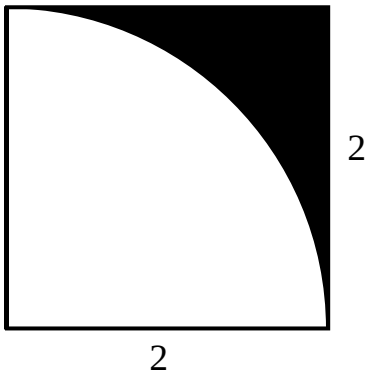
a) right circular cylinder



b) right circular cone



8. Find the area of the shaded region in the following figure. The quadrilateral is a square, and the arc is a portion of a circle of radius 2 with its center at the lower left vertex of the square.



9. Use the Triangle Inequality to determine if the following sets of lengths could be used to build a triangle.

a) $\{1,7,6\}$ **b)** $\{1,7,7\}$ **c)** $\{1,\sqrt{2},\sqrt{6}\}$

10. List the following from smallest to largest:

i) the perimeter of a square with 6 cm sides

ii) the perimeter of a rectangle with one side of 7 cm and another side of 6 cm

iii) the perimeter of a triangle with one side of 7 cm and another side of 5 cm