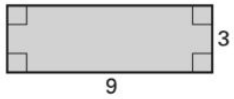
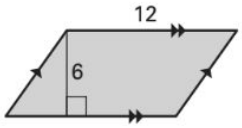
1. Find the area of the following shaded region:

a.



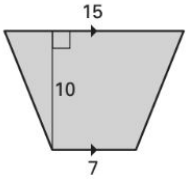
Area = _____

b.



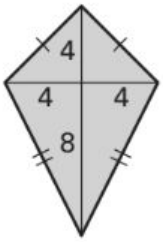
Area = _____

c.



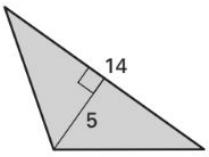
Area = _____

d.



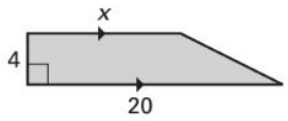
Area = _____

e.



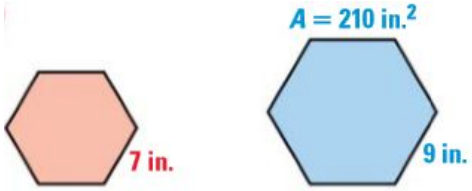
Area = _____

2. The quadrilateral below has an area of 64 square units. Find the value of x.



3. Find the radius of the circle given that the area is $81\pi\ cm^2$.

4. Corresponding lengths in the similar hexagon are given. Find the ratios (small to large) of the perimeters and areas. Find the area of the small hexagon. (6 points)



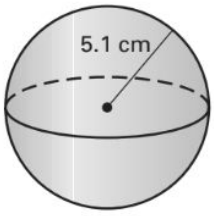
Perimeter Ratio = _____

Area Ratio = _____

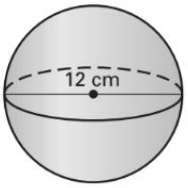
Area of Small Hexagon = _____

5. Find the surface area of the sphere below:

a.

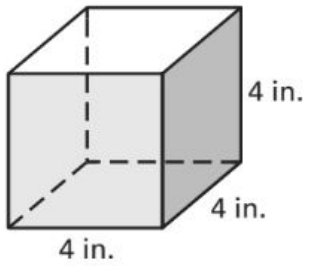


b.

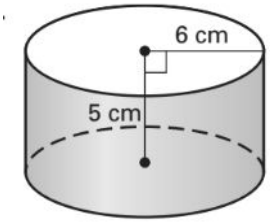


6. Find the volume of the following:

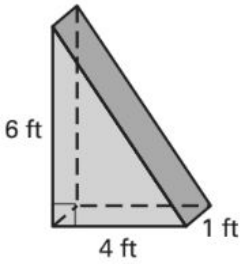
a.



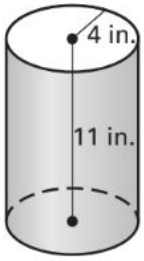
d.



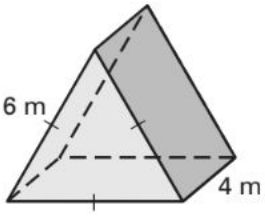
b.



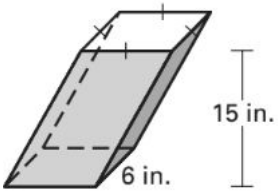
e.



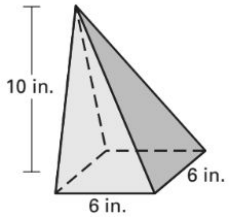
c.



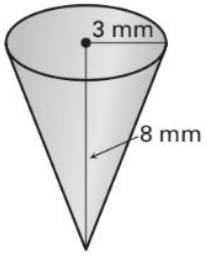
f.



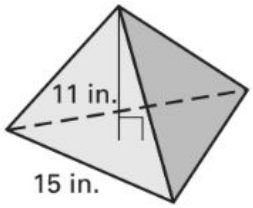
g.



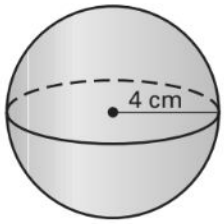
j.



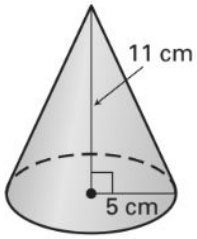
h. The pyramid below has a regular polygon for a base:



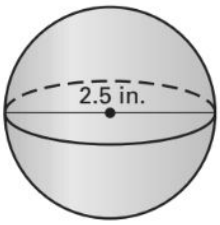
k.



i.



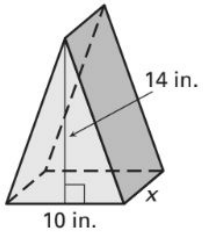
l.



7. Solve for the variable using the given measurements.

a.

Volume = 455 in.^{3}



b.

Volume = 2420 ft^3