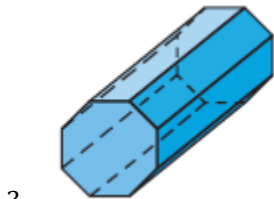
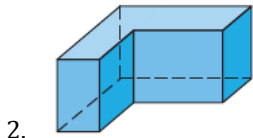
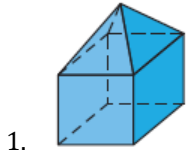


**Geometry Chapter 12 Review**

Find the number of faces, vertices, and edges of the polyhedron. Check your answer using Euler's Theorem.

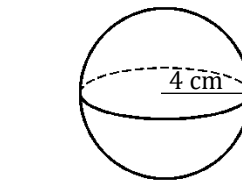
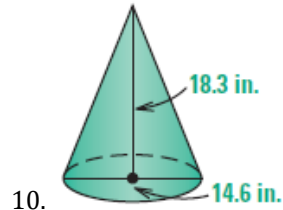
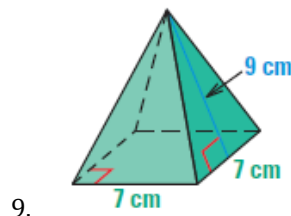
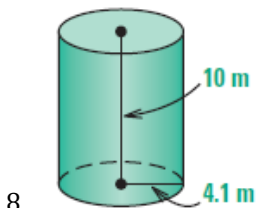
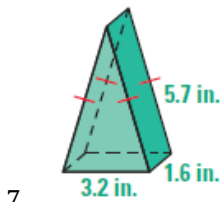
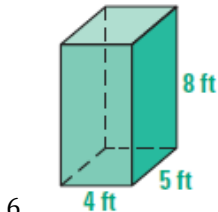


Use Euler's Theorem to find the value of  $n$ .

4. Faces: 12  
Vertices: 10  
Edges:  $n$

5. Faces:  $n$   
Vertices: 4  
Edges: 6

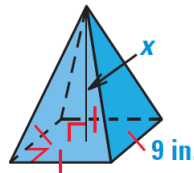
Find the surface area of the solid. The pyramids are regular and the prisms, cones, and cylinders are right. Round your answer to two decimal places, if necessary.



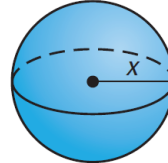
11.

Solve for  $x$  given the volume  $V$  of the right solid. Round your answers to the nearest unit.

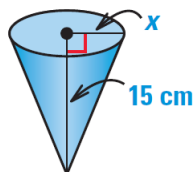
12.  $V = 324 \text{ in.}^3$



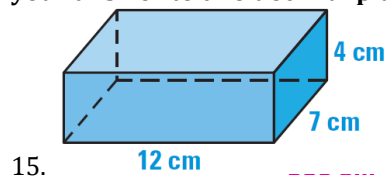
13.  $V = \frac{32\pi}{3} \text{ ft}^3$



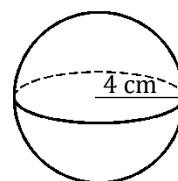
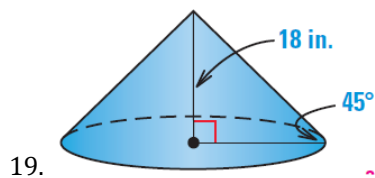
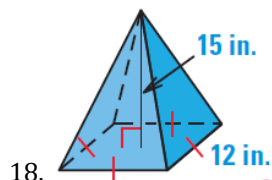
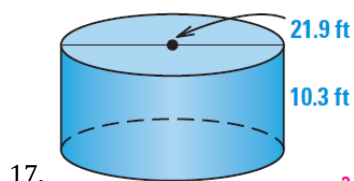
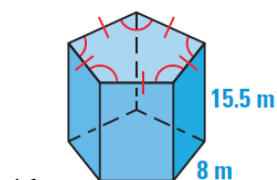
14.  $V = 180\pi \text{ cm}^3$



Find the volume of the solid. The pyramids are regular and the prisms, cones, and cylinders are right. Round your answer to two decimal places, if necessary.

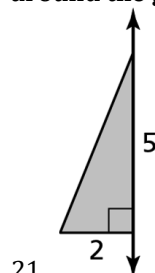


Name: \_\_\_\_\_

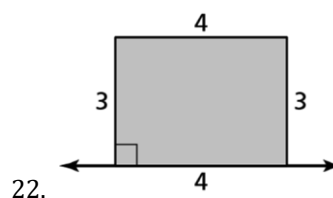


20.

Sketch the solid produced by rotating the figure around the given axis.



21.



22.

### Answers

1. 9, 9, 16
2. 8, 12, 18
3. 10, 16, 24
4. 20
5. 4
6.  $184 \text{ ft}^2$
7.  $40.87 \text{ in.}^2$
8.  $363.23 \text{ m}^2$
9.  $175 \text{ cm}^2$
10.  $619.26 \text{ in.}^2$
11.  $201.06 \text{ cm}^2$
12. 12 in.
13. 2 ft
14. 6 cm
15.  $336 \text{ cm}^3$
16.  $1706.71 \text{ m}^3$
17.  $3879.85 \text{ ft}^3$
18.  $720 \text{ in.}^3$
19.  $6107.26 \text{ in.}^3$
20.  $268.08 \text{ cm}^3$
21. Cone with radius 2 and height 5

22. Cylinder with radius 3 and height 4

