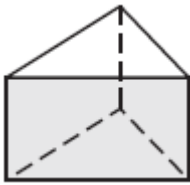


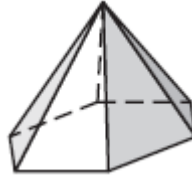
Geometry Chapter 12 – Practice Test NAME _____

Find the number of vertices, faces and edges of the polyhedron.

1.



2.



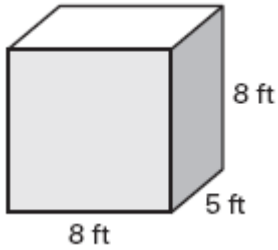
Use Euler's Theorem to find the value of n .

3. Faces: 8
 Vertices: 12
 Edges: n

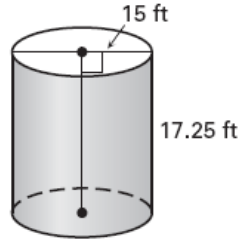
4. Faces: n
 Vertices: 16
 Edges: 24

Find the surface area of the solid. Round decimals to two places.

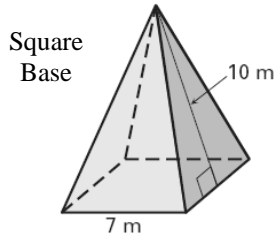
5.



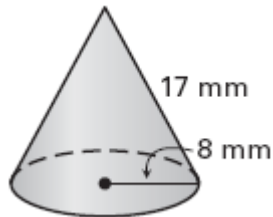
6.



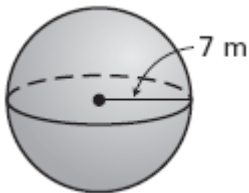
7.



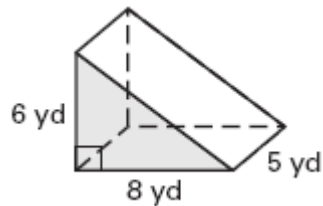
8.



9.

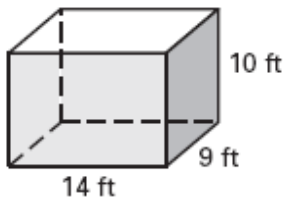


10.

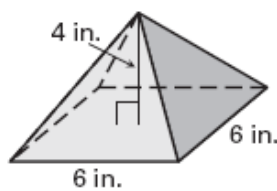


Find the volume of the solid. Round decimals to two places.

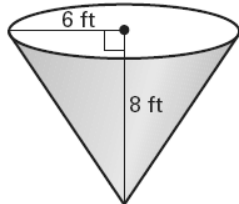
11.



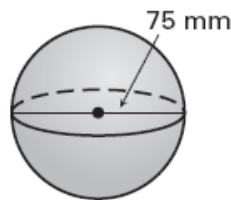
12.



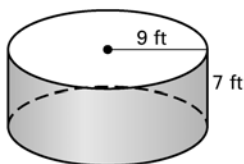
13.



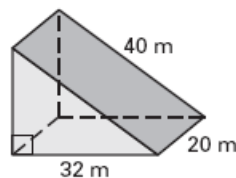
14.



15.



16.



Answers

1. $V = 6, F = 5, E = 9$	2. $V = 7, F = 7, E = 12$
3. $V + F = E + 2$ so $n = 18$	4. $V + F = E + 2$ so $n = 10$
5. $S = 2B + Ph = 2(40) + 26(8) = 288$	6. $S = 2\pi r^2 + 2\pi rh = 2\pi(7.5)^2 + 2\pi(7.5)(17.25) = 1166.32$
7. $S = B + \frac{Pl}{2} = 49 + \frac{(28)(10)}{2} = 189$	8. $S = \pi r^2 + \pi rl = \pi(8)^2 + \pi(8)(17) = 628.32$
9. $S = 4\pi r^2 = 4\pi(7)^2 = 615.75$	10. $S = 2B + Ph = 2\left(\frac{6 \cdot 8}{2}\right) + 24(5) = 168 *$
11. $V = Bh = (14 \cdot 9) \cdot 10 = 1260$	12. $V = \frac{Bh}{3} = \frac{(6 \cdot 6) \cdot 4}{3} = 48$
13. $V = \frac{\pi r^2 h}{3} = \frac{\pi(6)^2 \cdot 8}{3} = 301.59$	14. $V = \frac{4\pi r^3}{3} = \frac{4\pi(37.5)^3}{3} = 220,893.23$
15. $V = \pi r^2 h = \pi(9)^2 \cdot 7 = 1781.28$	16. $V = Bh = \left(\frac{32 \cdot 24}{2}\right) \cdot 20 = 480 *$

* Note that problems 10 and 16 require the use of the *Pythagorean Theorem* in order to find a measurement that is not given in the figure.