Write the letter for the correct answer in the blank at the right of each question.

1. What do the dark segments represent in an orthographic drawing?
   A changes in color  
   B where paper should be folded  
   C designs on the surface  
   D different heights in the surface

For Questions 2 and 3, refer to the figure.

2. Identify the figure.
   F pyramid  
   G prism  
   H cone  
   J cylinder

3. Identify the shape of a horizontal cross section of the figure.
   A triangle  
   B ellipse  
   C rectangle  
   D circle

4. The lateral area of a cube is 36 square inches. How long is each edge?
   F $\sqrt{6}$ in.  
   G 3 in.  
   H 6 in.  
   J 9 in.

5. Find the surface area of the outside of the open box.
   A 1920 in$^2$  
   B 998 in$^2$  
   C 752 in$^2$  
   D 400 in$^2$

For Questions 6 and 7, use a right cylinder with a radius of 3 inches and a height of 17 inches. Round to the nearest tenth.

6. Find the lateral area.
   F 320.4 in$^2$  
   G 348.7 in$^2$  
   H 377.0 in$^2$  
   J 537.2 in$^2$

7. Find the surface area.
   A 320.4 in$^2$  
   B 348.7 in$^2$  
   C 377.0 in$^2$  
   D 537.2 in$^2$

For Questions 8 and 9, refer to the figure.

8. Find the lateral area.
   F 144 cm$^2$  
   G $144 + 24\sqrt{3}$ cm$^2$  
   H 196 cm$^2$  
   J 288 cm$^2$

9. Find the surface area.
   A 144 cm$^2$  
   B $144 + 24\sqrt{3}$ cm$^2$  
   C 196 cm$^2$  
   D 288 cm$^2$

For Questions 10 and 11, refer to the figure.
Round to the nearest tenth.

10. Find the lateral area.
    F 44.0 in$^2$  
    G 75.4 in$^2$  
    H 88.0 in$^2$  
    J 100.5 in$^2$

11. Find the surface area.
    A 44.0 in$^2$  
    B 75.4 in$^2$  
    C 88.0 in$^2$  
    D 100.5 in$^2$
12. The surface area of a cube is 96 square feet. Find the volume of the cube.
   F 4 ft³  G 16 ft³  H 64 ft³  J 256 ft³  12._____

13. A cylinder whose height is 5 meters has a volume of $320\pi$ cubic meters. Find the radius of the cylinder.
   A 8 m  B 12.8 m  C 64 m  D 201 m  13._____

14. A square pyramid has a height that is 8 centimeters long and a base with sides that are each 9 centimeters long. Find the volume of the pyramid.
   F 648 cm³  G 324 cm³  H 216 cm³  J 162 cm³  14._____

15. Find the volume to the nearest tenth.
   A 3619.1 m³  C 14,476.5 m³  D 43,429.4 m³  15._____

16. Find the surface area to the nearest tenth.
   F 4536.5 m²  H 477.5 m²  G 2268.2 m²  J 238.8 m²  16._____

17. A sphere has a volume of $972\pi$ cubic inches. Find the radius of the sphere.
   A 2 in.  B 3 in.  C 6 in.  D 9 in.  17._____

18. The shortest distance between any two points in spherical geometry is
   F a straight line.
   G any circle.
   H a great circle.
   J a line through the sphere.  18._____

19. Two square pyramids are similar. The sides of the bases are 4 inches and 12 inches. The height of the smaller pyramid is 6 inches. Find the height of the larger pyramid.
   A 24 in.  B 18 in.  C 16 in.  D 14 in.  19._____

20. The ratio of the radii of two similar cylinders is 3:5. The volume of the smaller cylinder is $54\pi$ cubic centimeters. Find the volume of the larger cylinder.
   F $90\pi$ cm³  G $150\pi$ cm³  H $250\pi$ cm³  J $540\pi$ cm³  20._____

Bonus Find the surface area of the figure to the nearest tenth.

B: __________