1. What is the relationship between circumference and diameter?

2. An angle whose measure is less than 90° is a(n) _______________ angle.

3. ____________ angles are formed by the intersection of two lines and always have the exact same measure.

4. A part of a line between 2 endpoints is a(n) _____________________.

5. Adjacent angles are 2 angles in the same plane that share a common ______________ and a common ______________ but no common interior points.

6. If 2 shapes have the same size and shape they are said to be _____________________.

Find the measure of $x$

7. ______________

8. ______________

Find the measure of angles

9. ______________

10. ______________

11. What shape is formed when a square pyramid is cut obliquely by a plane? ______________

12. What shape is formed when a cylinder is cut obliquely by a plane? ______________

13. What shape is formed when a cone is cut perpendicularly by a plane? ______________

14. What shape is formed when a rectangular prism is cut parallel to the base by a plane? ______________
15. Suppose a cone is cut by a plane. Which cross-section is not possible?

A. Circle  B. Square  C. Triangle

16. The cross-section of a three-dimensional figure is shaped like a circle. The three-dimensional figure could not be a ________________.

A. Cone  B. Cylinder  D. Pyramid

17. What three-dimensional figure is formed when a rectangle is rotated about its axis? ________________

18. What three-dimensional figure is formed when a square is translated through space? ________________

19. Find the area and circumference of the circle below

\[ \text{18 cm} \]

Area=_______________

Circumference______________

20. Find the area and circumference of the circle below.

\[ \text{2 cm} \]

Area=_______________

Circumference______________

21. Find the area of the shaded region for the square and circle below:

\[ \text{12 cm} \]

Area=_______________

22. A circle has an area of 254.34 cm². What is the length of the diameter? Diameter = _____________

23. The distance around a bicycle wheel is 6.28 feet. What is the diameter? Diameter = _____________

24. A circle has an area of 28.26 cm². What is the length of the radius? Radius = _____________
25. Find the surface area and volume of the rectangular prism below:

![Rectangular Prism Diagram]

Surface Area = ______________
Volume = ______________

26. Find the surface area and volume of the cube below:

![Cube Diagram]

Surface Area = ______________
Volume = ______________

27. Find the surface area and volume of the triangular prism below:

![Triangular Prism Diagram]

Surface Area = ______________
Volume = ______________

28. 

![Pyramid Diagram]

Surface Area = ______________
Volume = ______________
29. Find the total area of this figure.

[Diagram of a rectangle with a quarter-circle cut out]

19 in

7 in

Total Area = ________________

30. Find the total area of this figure.

[Diagram of a rectangle with a triangle cut out]

12 in

6 in

16 in

Total Area = ________________

31. Find the value of x

[Diagram of a triangle with angles labeled]

(8x + 2)°

70°

60°

32. Find the value of x

[Diagram of a triangle with angles labeled]

(3x + 4)°

140°

(8x + 4)°

33. Circle the sets of side lengths that will make a triangle.

A. 3 cm, 6 cm, 2 cm
   B. 6 cm, 3 cm, 7 cm
   C. 2 cm, 10 cm, 5 cm
   D. 7 cm, 2 cm, 7 cm
   E. 5 cm, 5 cm, 5 cm
   F. 4 cm, 6 cm, 4 cm

34. Find the range of measures possible for the 3rd side of the triangle when given the first 2 lengths. (Hint use a compound inequality).

A. 11 cm, 11 cm ________________
   B. 4 cm, 8 cm ________________
   C. 13 cm, 17 cm ________________
   D. 3 cm, 4 cm ________________
35. If the measure of angle SUT is $65^\circ$, what is the measure of angle RUT?

36. The measure of angle DBC is half the measure of angle ABD. If angle ABC is $54^\circ$, what are the measures of angle DBC and angle ABD?

37. Using the Image to the side Identify the measure of each angle.

   a. Angle 1 _________________

   b. Angle 2 _________________

   c. Angle 3 _________________

   d. Angle 4 _________________

   e. Angle 5 _________________

38. Define each of the following terms on a separate piece of paper and attach to this study guide. Study ALL of your vocabulary!!!

   o Acute Angle
   o Isosceles triangle
   o Right triangle

   o Adjacent Angle
   o Obtuse Angle
   o Scalene triangle

   o Circumference
   o Prism
   o Semicircle

   o Complementary Angle
   o Pyramid
   o Supplementary angles

   o Diameter
   o Radius
   o Vertex

   o Equilateral triangle
   o Right Angle
   o Vertical Angle
39. Find the surface area and Volume (if applicable) for the following figures.

a. 

b. 

c. 

40.) Simplify each expressions:

a.) \(\sqrt{196} + 25^2\)  
b.) \(\sqrt{400} + 17^2\)  
c.) \(\sqrt{361} - (12^2 - 11^2)\)  
d.) \((2x + \sqrt{81}) - (x + \sqrt{169})\)  
e.) \(4x^2 + x^4 + 4x^4 + 12x + 6x^2 - 12x\)  
f.) \(\frac{18^2}{18^2} + \frac{\sqrt{225}}{\sqrt{225}} + \frac{\pi}{\pi}\)