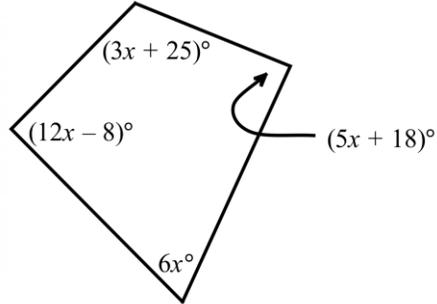This worksheet covers content found in chapters 9, 10, and 11. 😊
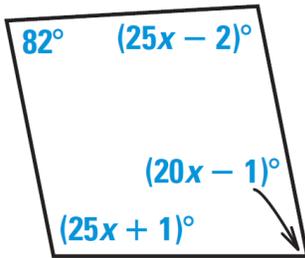
#1 – 11: From Chapter 9

1)   Find the value of x.

A. $x = 3.7$

B. $x = 5.6$

C. $x = 8.3$

D. $x = 12.5$

$(3x + 25)°$

$(12x - 8)°$

$(5x + 18)°$

$6x°$

2) Find x. Round to one decimal place, if needed.

$82°$ $(25x - 2)°$

$(20x - 1)°$

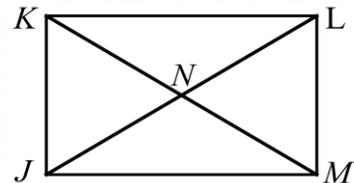$(25x + 1)°$

For #3 – 4, find the sum of the interior angles for each polygon.
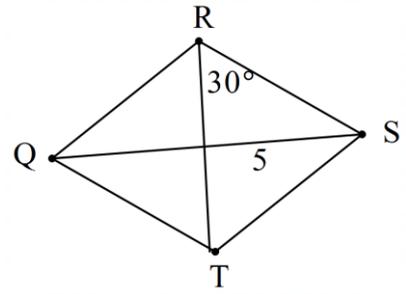
   3) nonagon   4) heptagon

5)   In the rectangle below $JN = x + 3$ and $KN = 3x + 1$. Find x **and** the length of segment **JL.**

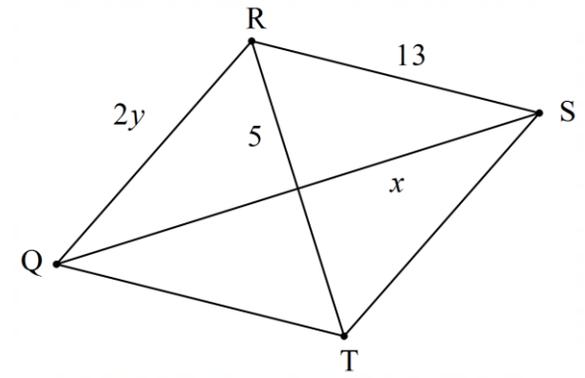K L

N

J M

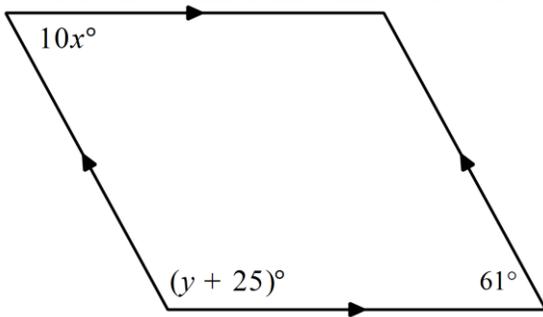6) Given the rhombus QRST as shown below. Find its perimeter.

7) A square has perimeter of 80 cm. Find its area.

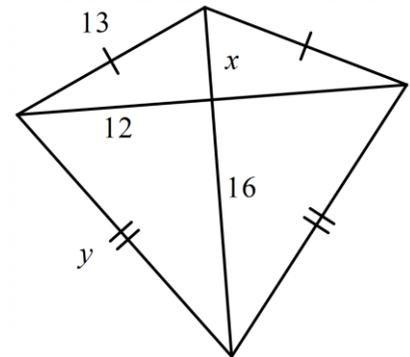8) Given the rhombus QRST as shown below. Find x and y.

9) Find the variables for the parallelogram shown below.

$10x°$

$(y + 25)°$ $61°$

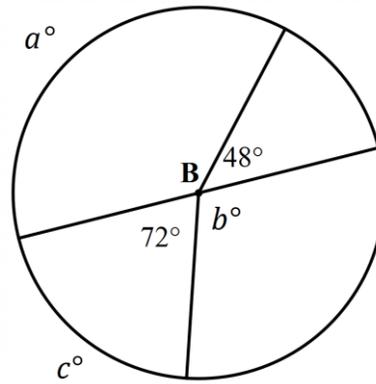**For #10 – 11, use the kite shown to the right.**

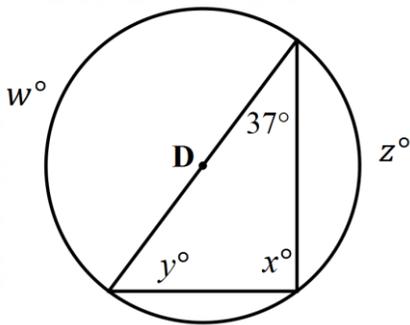10) Find x and y.   11) Find the perimeter of the kite.
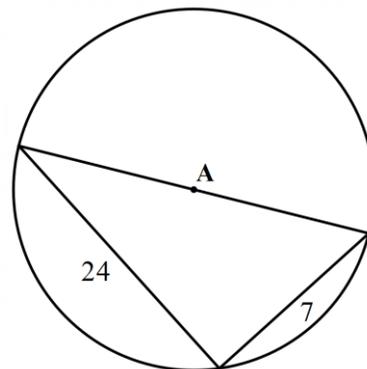
#12 – 20: From Chapter 10

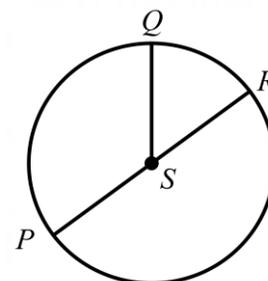12) Find *a, b,* and *c* in the circle shown to the right.
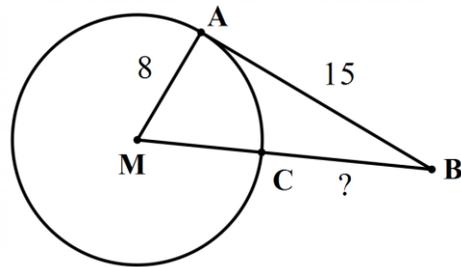
13) Find the variables in circle D below.

14) For circle A below, find the diameter **and** the circumference of the circle, in terms of pi.

15)   In the circle below, diameter $PR = 8\ cm$ and $m\angle QSP = 120°$. What is the arc length of $\overset{\frown}{PQ}$?   Round to one decimal place.
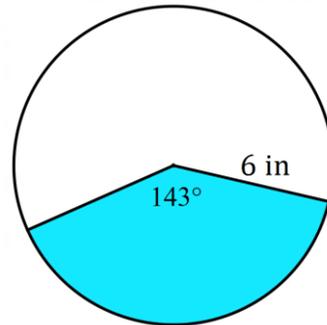
16) $\overline{AB}$ is tangent to circle M at point A. The circle has a radius of 8 and $\overline{AB} = 15$. What is the length of $\overline{CB}$?
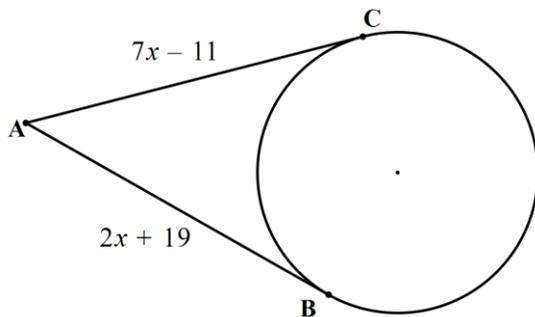
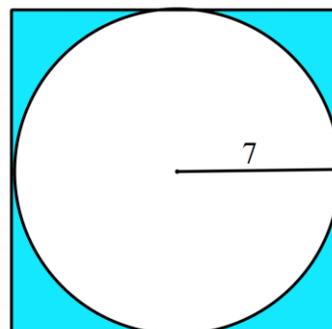17) What is the area of a circle, in terms of pi, that has a circumference of 100π feet ?

18) Find the area of the shaded sector shown to the right.
Round to one decimal place.

19) Find x and the length of $\overline{AB}$ in the diagram shown below, given that $\overline{AB}$ and $\overline{AC}$ are tangent to the circle.
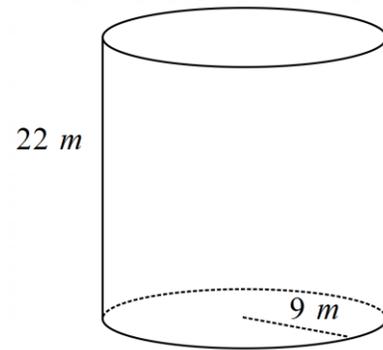
7x − 11

2x + 19

20) Find the area of the shaded region in the figure below. Write your answer in terms of pi.

#21 – 30: From Chapter 11

21) Find the volume of the cylinder to the right, in terms of pi.

22 m

9 m

22) A rectangular prism has a volume of $350\ cm^3$. Find the height of the prism if the length of the prism is $8\ cm$ and the width of the prism is $15\ cm$. Round to one decimal place, if needed.

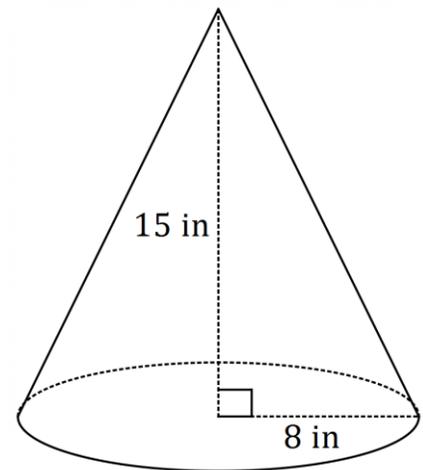23) What is the volume of the pyramid below? The base of the pyramid is a square.

    A. $240\ in^3$

    B. $288\ in^3$

    C. $336\ in^3$

    D. $384\ in^3$

8 in

12 in

12 in
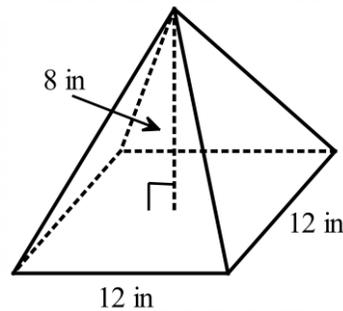
For #24 – 25, use the cone shown below.

24) Find the volume of the cone, rounded to one decimal place.
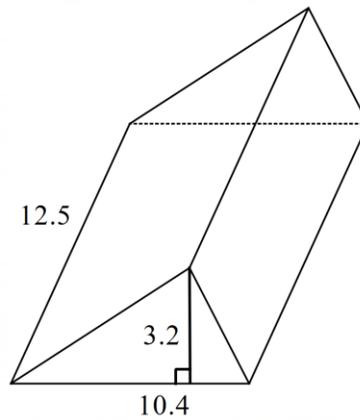
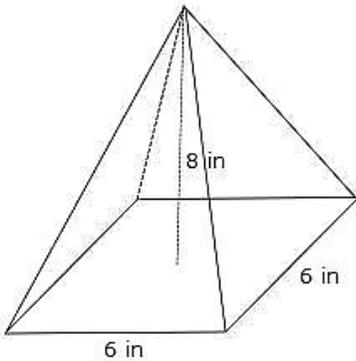25) Find the surface area of the cone, in terms of pi.

15 in

8 in

26) The surface area of a sphere is 80π. Find the radius of the sphere. If needed, write your answer as a simplified radical.

27) A cube has a surface area of $150\ ft^2$. Find the volume of the cube.

28) Find the volume of the solid shown to the right.

12.5

3.2

10.4

29) Find the volume of the solid below. The base is a square.

8 in

6 in

6 in

30) A sphere has a *diameter* of 19 inches. Find the volume of the sphere, rounded to one decimal place.