

## 4.G.A.2 Basic Concepts of Circles Part 2

4.G.A.2: Classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines, or the presence or absence of angles of a specified size. Recognize right triangles as a category, and identify right triangles.

Give what is asked in each item and then write your answers on the space provided.

1. Find the radius of each circle whose diameter is given below.

- a. 9 cm      b. 4 cm      c. 15 cm      d. 12 cm      e. 5 cm      f. 10 cm

Answers:

- a. \_\_\_\_\_ b. \_\_\_\_\_ c. \_\_\_\_\_ d. \_\_\_\_\_ e. \_\_\_\_\_ f. \_\_\_\_\_

2. Arrange the following circles in decreasing order of the length of their radius.



Answer:

3. Which of the following statement(s) is/are true?

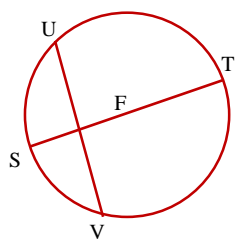
- a. A radius of a circle always passes through its center.  
b. A circle has an infinite number of radii.  
c. The area of a circle is not dependent on its radius.  
d. There is no other chord in a circle longer than the radii.

Answers:

4. Draw a circle P with radius 4 units and inscribe a triangle XYZ inside the circle. What do we call the line segments XY, YZ, and XZ?

Answer:

5. Consider the circle F on the left and then answer the questions.



- a. Give a diameter of a circle.  
b. What is the center of the circle?  
c. What is the relationship between the lengths of the two chords ST and UV?  
d. Suppose the length of segment ST is 5 cm. What is the length of a radius of circle F?

Answers:

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### Answer Key

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Give what is asked in each item and then write your answers on the space provided.

1. Find the radius of each circle whose diameter is given below.

- a. 9 cm      b. 4 cm      c. 15 cm      d. 12 cm      e. 5 cm      f. 10 cm

Answers:

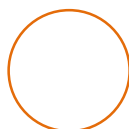
- a. 4.5 cm      b. 2 cm      c. 7.5 cm      d. 6 cm      e. 2.5 cm      f. 5 cm

2. Arrange the following circles in decreasing order of the length of their radius.

a.



b.



c.



Answer:

**b, a, c**

3. Which of the following statement(s) is/are true?

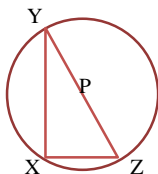
- a. A radius of a circle always passes through its center.  
b. A circle has an infinite number of radii.  
c. The area of a circle is not dependent on its radius.  
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Answers:

**b**

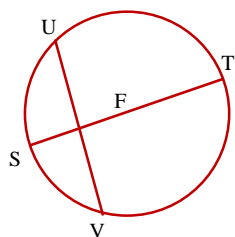
4. Draw a circle P with radius 4 units and inscribe a triangle XYZ inside the circle. What do we call the line segments XY, YZ, and XZ?

Answer:



**Line segments XY, YZ, and XZ are called chords.**

5. Consider the circle F on the left and then answer the questions.



- a. Give a diameter of a circle.  
b. What is the center of the circle?  
c. What is the relationship between the lengths of the two chords ST and UV?  
d. Suppose the length of segment ST is 5 cm. What is the length of a radius of circle F?

Answers:

- a. **ST**  
b. **F**  
c. **The length of ST is greater than the length of UV.**  
d. **Its length is 2.5 cm.**