Circumference of a circle

A. Choose the correct answer:

1. The circumference of a circle is the

a) area inside the circle b) straight line through the center

c) length around the circle d) half the radius

2. The formula for the circumference of a circle with radius r is

a) πr^2 b) $2\pi r$

c) $\frac{\pi d}{2}$ d) r^2

3. If the diameter of a circle is 14 cm, the circumference is

a) 22 cm b) 28 cm

c) 44 cm d) 88 cm

4. The value of π is approximately

a) 1.5 b) 2.14

c) 3.14 d) 3.5

5. The radius of a circle is 7 cm. Its circumference is

a) 14π cm b) 7π cm

c) 49π cm d) 28π cm

B. Write the Missing Terms to Complete the Sentences:

1. The circumference of a circle is the _____ around it.
2. The formula for circumference in terms of diameter is _____.
3. The diameter is _____ times the radius.
4. The value of π is commonly taken as _____.
5. A circle with radius r has circumference equal to _____.

C. Mark each sentence with a True (✔) or False (✗):

1. The circumference of a circle is a type of perimeter. _____
2. Circumference and area of a circle are the same. _____

3. The formula πr^2 is used for finding circumference. _____
4. The greater the radius, the greater the circumference. _____
5. A circle with radius 0 has circumference 0. _____

D. Figure out the answers to these questions:

1. Find the circumference of a circle with radius 8 cm using $\pi = 3.14$.
2. A circular track has diameter 20 m. Find the distance around it.
3. The circumference of a circle is 31.4 cm. Find the radius using $\pi = 3.14$.
4. Find the difference in circumference when radius changes from 5 cm to 10 cm.
5. Explain the relation between diameter, radius, and circumference with a labeled diagram.

E. Challenge yourself with these questions:

1. A circular pond has a diameter of 28 m. Find its circumference using $\pi = \frac{22}{7}$.
2. The wheel of a bicycle has a radius of 35 cm. How much distance will it cover in one complete rotation?
3. Draw a circle of radius 4 cm and write its circumference using the correct formula.
4. If the circumference of a circular playground is 220 m, find its radius.
5. A thread is wrapped once around a circular disc of radius 14 cm. What is the length of the thread used?