Circles: 10 practice questions

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Name: _____ Date: _____

Attempt all questions and show your working. Suggested time: 15 to 20 minutes.

Section A: Consolidating (Questions 1-4)

Question 1

A circle has a radius of 7 cm. What is its diameter?

Question 2

A circle has a diameter of 30 mm. What is its radius?

Question 3

Fill in the gaps.

(a) The distance all the way around a circle is called the _____.

(b) A straight line from one side of a circle to the other, passing through the centre, is called the _____.

(c) A straight line from the centre of a circle to its edge is called the _____.

Question 4

Using $\pi \approx 3.14$, find the circumference of a circle with a diameter of 10 cm.

Section B: Standard (Questions 5-10)

Question 5

A circle has a radius of 5 cm. Find its circumference, giving your answer in terms of π.

Question 6

Some students measured the circumference and diameter of round objects.

Object	Circumference	Diameter	Circumference ÷ diameter
Coin	9.42 cm	3 cm	?
Plate	81.64 cm	26 cm	?
Bike wheel	204.1 cm	65 cm	?

(a) Complete the last column.

(b) What do you notice? What is the name of this number?

Question 7

Explain what the number π tells us about every circle. Is 3.14 the exact value of π?

Question 8

A circle has a circumference of 18π cm. Find:

(a) its diameter

(b) its radius

Question 9

A circular pond has a circumference of 62.8 m. Using π ≈ 3.14, find:

(a) its diameter

(b) its radius

Question 10

Write these numbers in order from smallest to largest:

22/7, quad π, quad 3.14

Circles: answers

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Question 1

Answer: 14 cm

Question 2

Answer: 15 mm

Question 3

Answer: (a) circumference (b) diameter (c) radius

Question 4

Answer: 31.4 cm (3.14 × 10)

Question 5

Answer: 10π cm (2 × π × 5)

Question 6

Answer: (a) 3.14, 3.14, 3.14 (b) Circumference ÷ diameter is the same (about 3.14) for every circle. This number is π (pi).

Question 7

Answer: π is the number of times the diameter fits around the circumference (C ÷ d), and it is the same for every circle. No, 3.14 is only an approximation: π = 3.14159… and its decimals never end or repeat.

Question 8

Answer: (a) 18 cm (b) 9 cm

Question 9

Answer: (a) 20 m (62.8 ÷ 3.14) (b) 10 m

Question 10

Answer: 3.14, π, 22/7 (since π ≈ 3.1416 and 22/7 ≈ 3.1429)