Multiple choice questions - Circles: circumference and area

Year: Year 8 · 10

Question 1 A circle has radius 4 cm. Its diameter is

- ◯ **A.** 2 cm
- ◯ **B.** 4 cm
- ◯ **C.** 8 cm
- ◯ **D.** 16 cm

Question 2 The circumference of a circle with diameter 6 cm is

- ◯ **A.** 6π
- ◯ **B.** 12π
- ◯ **C.** 36π
- ◯ **D.** 3π

Question 3 The area of a circle with radius 3 cm is

- ◯ **A.** 6π
- ◯ **B.** 9π
- ◯ **C.** 3π
- ◯ **D.** 36π

Question 4 Which formula gives circumference?

- ◯ **A.** πr^2
- ◯ **B.** $2\pi r$
- ◯ **C.** $\frac{1}{2}\pi r$
- ◯ **D.** πd^2

Question 5 Circumference 20π means the radius is

- ◯ **A.** 5
- ◯ **B.** 10
- ◯ **C.** 20
- ◯ **D.** 40

Question 6 Area of a semicircle of radius 2 is

- ◯ **A.** 2π
- ◯ **B.** 4π
- ◯ **C.** π

- ◯ **D.** 8π

Question 7 A line joining two points on a circle (not through the centre) is a

- ◯ **A.** diameter
- ◯ **B.** radius
- ◯ **C.** chord
- ◯ **D.** sector

Question 8 A sector of angle 90 degrees is what fraction of a circle?

- ◯ **A.** $\frac{1}{2}$
- ◯ **B.** $\frac{1}{4}$
- ◯ **C.** $\frac{1}{3}$
- ◯ **D.** $\frac{1}{8}$

Question 9 The perimeter of a semicircle with diameter 10 is

- ◯ **A.** 5π
- ◯ **B.** 10π
- ◯ **C.** $5\pi + 10$
- ◯ **D.** $10\pi + 10$

Question 10 If the radius doubles, the area is multiplied by

- ◯ **A.** 2
- ◯ **B.** 4
- ◯ **C.** 8
- ◯ **D.** 16

Answer grid - Circles: circumference and area

Year: Year 8

Question	Answer	Explanation
1	**C**	$d = 2r$.
2	**A**	$C = \pi d$.
3	**B**	$\pi r^2 = 9\pi$.
4	**B**	$2\pi r$.
5	**B**	$2\pi r = 20\pi$.
6	**A**	$\frac{1}{2} \times 4\pi$.
7	**C**	A chord.
8	**B**	$\frac{90}{360}$.
9	**C**	Curve 5π plus straight edge 10.
10	**B**	$(2r)^2 = 4r^2$.