

MATHS WORKSHEETS- GEOMETRY- AREA AND PERIMETER OF SHAPES- 2 SEMICIRCLES

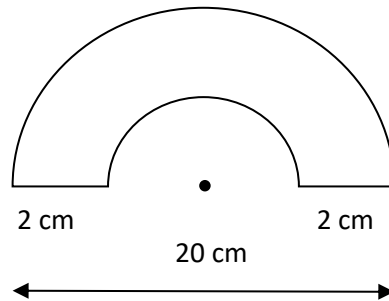
Find the area and perimeter of each of these figures correct to 2 decimal places.

<p>1.</p> <p>2 cm 2 cm</p> <p>20 cm</p> <p>Area: Perimeter:</p>	<p>2.</p> <p>4.2 cm 4.2 cm</p> <p>28 cm</p> <p>Area: Perimeter:</p>	<p>3.</p> <p>5 cm 5 cm</p> <p>30 cm</p> <p>Area: Perimeter:</p>
<p>4.</p> <p>3.8 cm 3.8 cm</p> <p>16.2 cm</p> <p>Area: Perimeter:</p>	<p>5.</p> <p>2 cm 2 cm</p> <p>22 cm</p> <p>Area: Perimeter:</p>	<p>6.</p> <p>5.2 cm 5.2 cm</p> <p>32 cm</p> <p>Area: Perimeter:</p>
<p>7.</p> <p>3 cm 3 cm</p> <p>30 cm</p> <p>Area: Perimeter:</p>	<p>8.</p> <p>1.5 cm 1.5 cm</p> <p>18 cm</p> <p>Area: Perimeter:</p>	<p>9.</p> <p>2.6 cm 2.6 cm</p> <p>28 cm</p> <p>Area: Perimeter:</p>

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Answer Key:

Question 1:



Radius of big semi-circle, $R=10$ cm

Radius of small semi-circle, $r=8$ cm

Area= Area of big semicircle - Area of small semi-circle

$$\begin{aligned} \text{Area} &= \frac{\pi R^2}{2} - \frac{\pi r^2}{2} \\ &= \frac{\pi}{2}(R^2 - r^2) \\ &= (3.1416/2) * (10^2-8^2) \\ &= 56.55 \text{ cm}^2 \end{aligned}$$

Perimeter = Perimeter of big semicircle + Perimeter of small semicircle + side + side

$$\begin{aligned} &= \pi R + \pi r + s + s \\ &= \pi(R + r) + s + s \\ &= 3.1416 * (10+8) + 2+2 \\ &= 60.55 \text{ cm} \end{aligned}$$

	Area	Perimeter	Radius
1.	56.55 cm ²	60.55 cm	R=10, r=8
2.	157.02 cm ²	83.17 cm	R=14, r=9.8
3.	196.35 cm ²	88.54 cm	R=15, r=10
4.	74.02 cm ²	46.56 cm	R=8.1, r=4.3
5.	62.83 cm ²	66.83 cm	R=11, r=9
6.	218.91 cm ²	94.59 cm	R=16, r=10.8
7.	127.23 cm ²	90.82 cm	R=15, r=12
8.	38.88 cm ²	54.84 cm	R=9, r=7.5
9.	103.74 cm ²	85.00 cm	R=14, r=11.4