Guide to:
Area and circumference

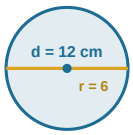
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Explanation:

For any circle with radius ***r*** and diameter ***d* = 2*r***: the **Circumference** (perimeter) is ***C* = π*d*** (or **2π*r***), and the **Area** is ***A* = π*r*²**. Always check whether the question gives you the **radius** or the **diameter** before starting!

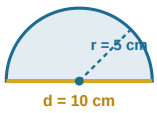
If the question asks for your answer **in terms of π** (non-calculator), leave π as a symbol in your answer (e.g. **25π cm²**). Remember that the **perimeter of a semicircle** includes the straight diameter as well as the curved arc: **Perimeter =** $\frac{1}{2}\pi d + d$.

Example 1: A circle has a **diameter of 12 cm**. Work out its area and circumference to **1 d.p.**



r = 12 ÷ 2 = **6 cm**
A = π × 6² = **113.1 cm²**
C = π × 12 = **37.7 cm**

Example 2: Work out the **perimeter** of a semicircle with radius **5 cm**. Give your answer to **1 d.p.**



d = 2 × 5 = **10 cm**
Arc = $\frac{1}{2}\pi(10)$ = **15.71 cm**
15.71 + 10 = **25.7 cm**

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