

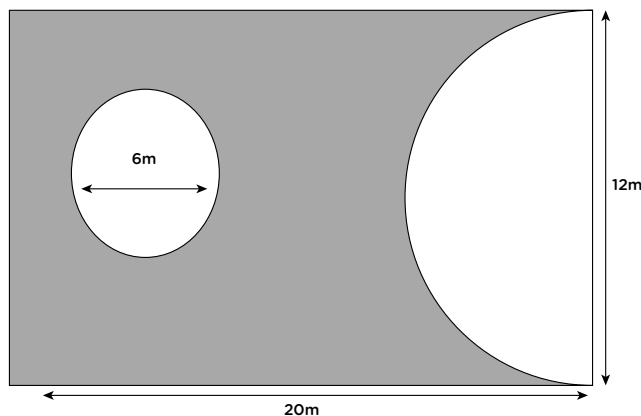
Working with multiples of π

GCSE Mathematics

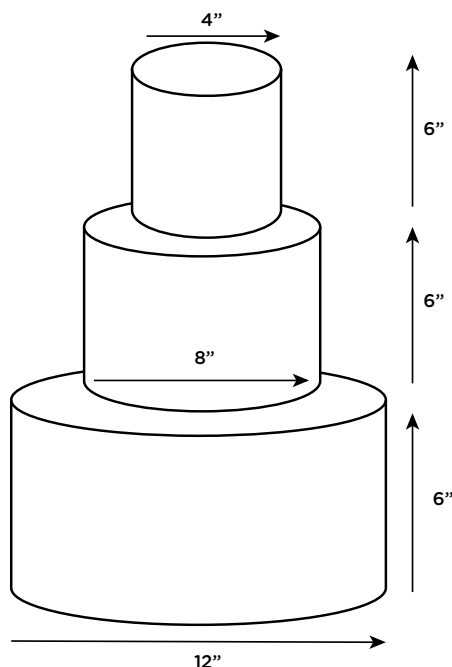
FN8 HN8

1. Find the perimeter of a semi-circle with radius 7cm in terms of π .

2. A children's play area is covered with Astroturf and sand. Find the area of the Astroturf (shaded area) in terms of π .



3. Nadia is making a 3 tier cake for a wedding. Each tier is 6 inches high and the diameters of the cakes are 12, 8 and 4 inches. Find the volume of the cake in terms of π .

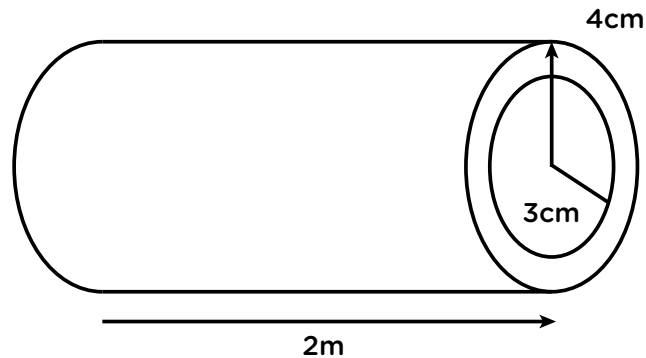


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4. A pipe has an external radius of 4cm and an internal radius of 3cm. It is 2m in length.



- (a) Find the volume of the pipe in terms of π .
- b) Calculate the difference between the external curved surface area and the internal curved surface area of the pipe. Write your answers in terms of π .