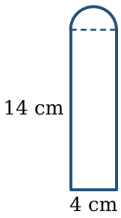
Day 179	A Tier 10-a-day
1 Expand and simplify $(4x - 1)^2$	
2 A circular pond has diameter 26 m. Work out, in terms of π, (a) the circumference, (b) the area.	
3 Expand and simplify $(3x - 4)(x + 4) + (x - 3)^2$	
4 The price of a train ticket increases by 8%. The new price is £270. Work out the price before the increase.	
5 A colony has 11,000 and grows by 8% per day. (Calculator) Work out the number of bacteria after 4 days. Give your answer to the nearest whole number.	

Day 179	A Tier 10-a-day
6 The diagram shows a shape made from a rectangle and a semicircle. Work out the perimeter of the shape. Give your answer in terms of π. The diagram is not drawn accurately.  	
7 Tara and Dev each invest £2500 for 3 years. (Calculator) Tara's account pays 5% simple interest per year. Dev's account pays 5% compound interest per year. Work out how much more interest Dev earns than Tara.	
8 (a) Show that $0.\dot{2}\dot{6} = \frac{26}{99}$ (b) Hence write $3.\dot{2}\dot{6}$ as a mixed number in its simplest form.	
9 Write $0.6\dot{4}$ as a fraction in its simplest form.	
10 A pizza slice is a sector of a circle has angle 135° at the centre and arc length $\frac{21}{2}\pi$ cm. Work out the radius of the sector.	