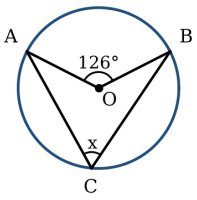
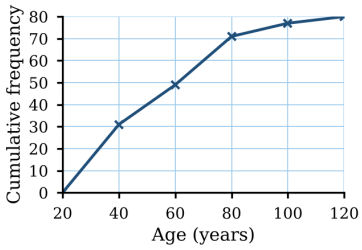
Day 358	A Tier 10-a-day
1 Solve $5(x + 2) = -3(x + 5) + 9$	
2 Isla and Hugo share some money in the ratio 5 : 1. Hugo gets £12. How much does Isla get?	
3 Here are the first four terms of a sequence. 5, 8, 11, 14 (a) Find an expression for the nth term. (b) Is 111 a term of this sequence? You must show your working.	
4 A, B and C are points on a circle with centre O. Angle AOB = 126°. Work out the size of angle x. Give a reason for your answer. 	
5 No tax is paid on the first £12,500 of income. Tax of 25% is paid on the next £28,000. Tax of 35% is paid on all income above £40,500. (Calculator) Tom earns £60,500 a year. Work out the income tax paid.	

Day 358 **A Tier 10-a-day**

6 A sphere has radius 11 cm.
Work out the surface area of the sphere.
Give your answer in terms of π.

7 The cumulative frequency graph shows information about the age of 80 visitors.
Use the graph to find an estimate for
(a) the median,
(b) the number of visitors with a age greater than 80 years.



8 5 friends stand in a line for a photograph.
(a) How many different orders are possible?
(b) How many different orders are there if the youngest must stand first?

9 A is the point (8, 0) and B is the point (2, 2).
Find the equation of the perpendicular bisector of AB.

10 Boat P sails 7 km from a harbour on a bearing of 085°.
Boat Q sails 25 km from the same harbour on a bearing of 195°. (Calculator)
Work out the distance between the two boats.
Give your answer to 3 significant figures.