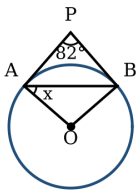
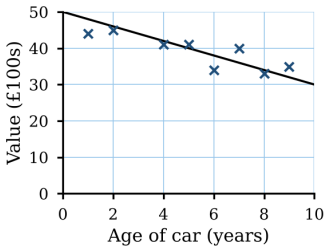
Day 246	A Tier 10-a-day
1 £1 = €1.15. (a) Change £60 to euros. (b) Change €230 to pounds.	
2 A taxi company charges £2 plus £1 for each mile. (a) Write a formula for the total cost, £C, after m miles. (b) Omar pays £8 in total. Work out the number of miles.	
3 PA and PB are tangents to a circle with centre O. Angle APB = 82°. Work out the size of angle x (angle OAB). Give a reason for each step of your working. 	
4 (a) Write 4353.2 correct to 3 significant figures. (b) Write 24.447 correct to 1 decimal place.	
5 A is the point (1, −2) and B is the point (−5, 6). (a) Write $\overrightarrow{AB}$ as a column vector. (b) Work out the length of AB.	

Day 246 **A Tier 10-a-day**

6 Expand and simplify $(4 + \sqrt{11})(4 - \sqrt{11})$

7 The scatter graph shows the ages and values of some cars.
A line of best fit is drawn.
(a) Describe the correlation.
(b) Estimate the value, in £100s, of a car that is 6 years old.



8 Without using a calculator, work out the exact value of
$4 \cos 30° + \tan 45°$
Give your answer in its simplest form.

9 Make x the subject of $y = \frac{5x + 5}{-x - 3}$

10 A cyclist travels 260 metres in 17.3 seconds.
The distance is correct to the nearest 10 metres and the time to the nearest 0.1 second.
(a) Work out the upper bound and the lower bound of the speed in m/s.
(b) Write the speed to a suitable degree of accuracy. Give a reason for your answer.