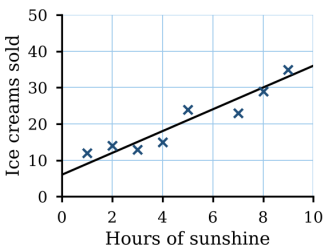
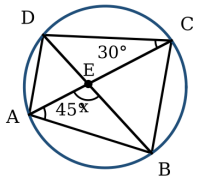
Day 200	A Tier 10-a-day
1 The scale of a map is 1 : 25000. A road is 1 km long. Work out the length of the road on the map, in centimetres.	
2 t = 4,900 is rounded to the nearest 100. Write down the error interval for t.	
3 $x_{n+1} = \sqrt{2x_n + 8}$ $x_0 = 4$ Work out the values of x_1, x_2 and x_3. Give your answers correct to 3 decimal places. (Calculator)	
4 Write 308 as a product of its prime factors. Give your answer in index form.	
5 The scatter graph shows the hours of sunshine and the number of ice creams sold on some days. A line of best fit is drawn. (a) Describe the correlation. (b) Estimate the number of ice creams sold on a day with 4 hours of sunshine. 	

Day 200 **A Tier 10-a-day**

6 A, B, C and D are points on a circle. AC and BD meet at E.
Angle BAC = 45° and angle ACD = 30°.
Work out the size of angle x (angle AEB).
Give reasons for your working.



7 Write as a single fraction

$$\frac{4}{(x-3)} - \frac{5}{(x+1)}$$

8 A bag contains red counters and blue counters in the ratio 3 : 4.
7 more blue counters are added to the bag.
The ratio of red counters to blue counters is now 5 : 9.
How many counters were in the bag at the start?

9 The value of an investment grows by 5% each year. (Calculator)
After 2 years it is worth £22,050.
Work out its value at the start.

10 The diagram shows a circle with centre O and radius 10 cm.
Angle AOB = 150°. (Calculator)
Work out the area of the shaded segment.
Give your answer to 3 significant figures.

