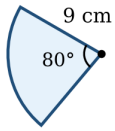
Day 328	A Tier 10-a-day
1 Work out $(6 \times 10^{-4}) \div (1.5 \times 10^{-7})$ Give your answer in standard form.	
2 Convert 12500 cm^2 into m^2.	
3 A straight line has equation $5x - 3y = 20$ (a) Find the gradient of the line. (b) Find the coordinates of the point where the line crosses the x-axis.	
4 Solve $3^{x+4} = 9^x$	
5 There are 29 students in a class. 17 students do tennis and 6 students do badminton. 8 students do neither. (a) Work out how many students do both. (b) One student is chosen at random. Find the probability that they do tennis only.	

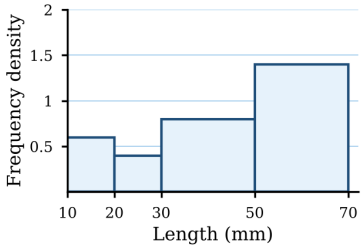
Day 328 **A Tier 10-a-day**

6 Expand and simplify
$(x + 3)(x - 4)(x + 5)$

7 The diagram shows a sector of a circle of radius 9 cm.
Work out the perimeter of the sector.
Give your answer in terms of π.
The diagram is not drawn accurately.



8 The histogram shows information about the length of some items.
(a) Work out the number of items with a length in the class 20 to 30 mm.
(b) Work out an estimate for the number with a length greater than 25 mm.



9 $A = 3 \times 5 \times 7$
$B = 3^3 \times 5^2 \times 7$
Find the highest common factor (HCF) and the lowest common multiple (LCM) of A and B.
Give your answers as products of prime factors.

10 A bag contains 3 red counters and 5 blue counters.
Three counters are taken at random without replacement.
Work out the probability that at least one of the three counters is blue.