Day 198	B Tier 10-a-day
1 A right-angled triangle has one angle of 61°. Work out the size of the other acute angle.	
2 Work out (a) 3 × (5 + 19) ÷ 3 (b) (6 + 5) × 7 − 10	
3 The stem and leaf diagram shows 12 values. (a) Find the median. (b) Work out the range. **Stem** | **Leaf** 2 | 0 1 4 7 3 | 2 5 8 9 4 | 4 5 6 9 Key: 2 | 0 means 20	
4 An equilateral triangle has sides of length (3x + 6) m. The perimeter of the triangle is 117 m. Work out the value of x.	
5 Simplify fully (a) $(x^4)^3$ (b) $4x^6 \times 6x^4$	

Day 198 **B Tier 10-a-day**

6 27 adults were asked.
17 of them like tea and 6 of them like coffee.
2 of them did both.
(a) How many did neither?
(b) One is chosen at random. Find the probability that they like tea but do not like coffee.

7 Complete the table of values for $y = x^2 + x - 3$

x	−2	−1	0	1	2	3
y				−1		9

8 Write each number as an ordinary number.
(a) 2.3×10^4
(b) 9×10^{-5}

9 A ladder 7 m long leans against a vertical wall. (Calculator)
The foot of the ladder is 1.1 m from the wall on horizontal ground.
Work out the angle between the ladder and the ground.
Give your answer correct to 1 decimal place.

10 The equation $x^3 + x = 14$ has a solution between 2 and 3. (Calculator)
Use trial and improvement to find this solution.
Give your answer correct to 1 decimal place.