Day 1	B Tier 10-a-day
1 Work out $2\frac{1}{3} + 1\frac{3}{4}$ Give your answer as a mixed number.	
2 Simplify fully (a) $4a^3b \times 3ab^2$ (b) $(2y^2)^3$	
3 12 biscuits need 180 g of butter. (a) How much butter is needed for 20 biscuits? (b) What is the greatest number of biscuits that can be made with 450 g of butter?	
4 Each exterior angle of a regular polygon is 24°. (a) How many sides does the polygon have? (b) Work out the size of each interior angle.	
5 The probability that it rains on Saturday is 0.3. The probability that it rains on Sunday is 0.4. The two events are independent. (a) Work out the probability that it rains on both days. (b) Work out the probability that it rains on at least one of the two days.	

Day 1 **B Tier 10-a-day**

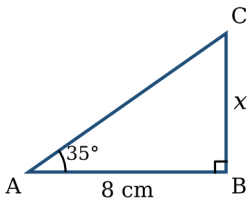
6 The table shows the number of pets owned by each of 20 students.
Work out the mean number of pets.

Pets	0	1	2	3	4
Frequency	2	5	7	4	2

7 Solve $3(2x - 1) = 4x + 9$

8 (a) Write 0.00045 in standard form.
(b) Work out $(3 \times 10^5) \times (4 \times 10^3)$
Give your answer in standard form.

9 Work out the length x. (Calculator)
Give your answer correct to 1 decimal place.
The diagram is not drawn accurately.



10 In a sale, all prices are reduced by 15%.
A jacket costs £51 in the sale. (Calculator)
Work out the price of the jacket before the sale.