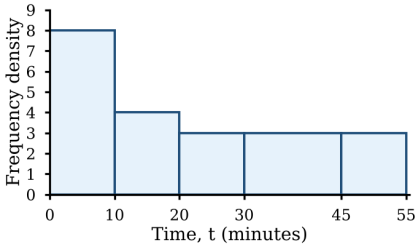
Day 61	A Level Maths: C Tier 10-a-day

1 For events A and B, P(A) = 0.15, P(B) = 0.55 and P(A ∪ B) = 0.6.
(a) Find P(A ∩ B).
(b) Find P(A′ ∩ B′).

2 Write down the exact value of cos 210°.

3 An arithmetic series has first term 6, last term 146 and 29 terms. Find the sum of the series.

4 The histogram shows the times, t minutes, taken by some people to complete a puzzle. Find the number of people who took between 20 and 45 minutes.



5 θ is small and measured in radians.
Use the small angle approximations to find an approximation for 1 − cos 5θ.

Day 61	A Level Maths: C Tier 10-a-day
6 Sketch $y = 3^x - 9$. Write down the equation of the asymptote and the coordinates where the curve meets the axes.	
7 A particle moves in a straight line with velocity $v = (6t^2 + 5)$ m s^{-1} at time t seconds. Find the distance travelled between $t = 3$ and $t = 6$ (the particle does not turn round).	
8 Evaluate $\int_0^2 (x^2 + 2)\,dx$.	
9 A body moves in a straight line. Its displacement from O at time t seconds is s metres, where $s = 2t^3 + 4t^2$. Find its velocity when $t = 1$.	
10 The curve C has equation $y = x^3 + 3x^2 + 3x + 2$. C is reflected in the y-axis. Find the equation of the image.	