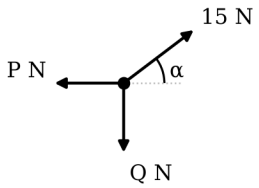
Day 23	A Level Maths: C Tier 10-a-day
1 Simplify $\sqrt{4x^2} \times 5x^{-2}$.	
2 Use a small angle approximation to estimate cos 0.04, where 0.04 is in radians.	
3 A reporter asks the first 10 people who walk out of a hospital for their views. Name the sampling method used.	
4 A particle moves in a straight line with constant acceleration. Its speed increases from 4 m s^{-1} to 16 m s^{-1} as it travels 80 m. Find the acceleration.	
5 Sketch $y = \|x - 3\|$. Write down the coordinates of the vertex and of the point where the graph meets the y-axis.	

Day 23	A Level Maths: C Tier 10-a-day
6 Differentiate y = tan 3x with respect to x.	
7 The table shows grouped data. Class: $20 \leq x < 30$; $30 \leq x < 40$; $40 \leq x < 50$; $50 \leq x < 60$ Frequency: 4, 3, 3, 7 Estimate the median, to 3 s.f.	
8 Solve $-2\sin^2 x - 3\cos x + 3 = 0$ for $0° \leq x \leq 360°$.	
9 A particle is in equilibrium under the three forces shown. $\cos \alpha = \frac{4}{5}$. Find P and Q. 	
10 Find the set of values of k for which $2x^2 + 6x + k = 0$ has no real roots.	