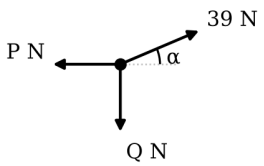
Day 145	A Level Maths: C Tier 10-a-day
1 $f(x) = \frac{5}{x-1}$, $x \neq 1$. Find $f^{-1}(x)$.	
2 Write down the exact value of tan 120°.	
3 A is (5, 4) and B is (15, −6). Find (a) the midpoint of AB, (b) the length of AB, as a surd in simplest form.	
4 A fair die is rolled until a six appears. X is the number of rolls. Find P(X = 6), to 3 s.f.	
5 A particle is in equilibrium under the three forces shown. $\cos\alpha = \frac{12}{13}$. Find P and Q. 	

Day 145	A Level Maths: C Tier 10-a-day
6 $f(x) = (x - 4)^2$, $x \geq 0$. Find the range of f.	
7 A particle moves in a straight line. Its velocity at time t seconds is $v = (t^2 - 10t + 21)$ m s^{-1}. (a) Find the times when the particle is at rest. (b) Find its acceleration at the first of these times.	
8 $\frac{6x + 20}{(x + 2)(x + 4)} \equiv \frac{A}{x + 2} + \frac{B}{x + 4}$. Find A and B, and hence find $\int \frac{6x + 20}{(x + 2)(x + 4)}\,dx$.	
9 $X \sim B(200, 0.3)$. Use a normal approximation to find $P(X \leq 57)$, to 3 s.f.	
10 The curve $y = x^2$ and the line $y = 6x$ meet at the origin and at P. Find the area enclosed between them.	