Day 106	A Level Maths: C Tier 10-a-day
1 Solve $5x - 6 < -4x + 4$.	
2 $P(A \cap B) = 0.35$ and $P(B) = 0.5$. Find $P(A \mid B)$.	
3 Describe the single transformation that maps the graph of $y = f(x)$ onto the graph of $y = -f(x)$.	
4 In how many ways can a team of 3 be chosen from 10 players?	
5 A curve has parametric equations $x = 1t$, $y = 2t^2 + 1$. Find the gradient at the point where $t = 1$.	

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6 Find the set of values of k for which $2x^2 - 4x + k = 0$ has no real roots.

7 A crate is on the point of sliding down a rough plane inclined at α to the horizontal, where $\tan \alpha = \frac{5}{12}$. Find the coefficient of friction.

8 Use a double angle formula to find $\int \sin^2 5x \, dx$.

9 A particle moves with constant velocity $(2\mathbf{i} + 5\mathbf{j})$ m s^{-1}. It is at the point with position vector $(-\mathbf{j})$ m at t = 0. Find the time when its position vector is $(10\mathbf{i} + 24\mathbf{j})$ m.

10 The diagram shows the curve $y = 3x(7 - x)$. Find the area of the shaded region, between the curve and the x-axis.

