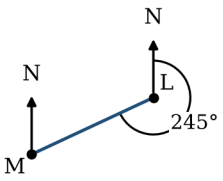
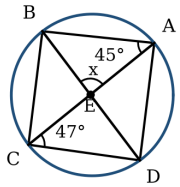
Day 353	A Tier 10-a-day
1 Solve $x^2 - 10x + 4 = 0$ by completing the square. Give your answers in surd form.	
2 The population of a town is 25000. (Calculator) It increases by 10% each year. Work out the population after 2 years. Give your answer to the nearest whole number.	
3 The bearing of M from L is 245°. Work out the bearing of L from M. The diagram is not drawn accurately. 	
4 (a) Change 12,000 cm^3 to litres. (b) Change 1,250 mm^2 to cm^2.	
5 A square and an equilateral triangle share the side AB and are on opposite sides of it. The two shapes meet at the point A. Work out the size of the angle at A that is not inside either shape.	

Day 353	A Tier 10-a-day
6 No tax is paid on the first £12,000 of income. Tax of 25% is paid on the next £35,000. Tax of 35% is paid on all income above £47,000. (Calculator) Aisha earns £61,500 a year. Work out the income tax paid.	
7 Write as a single fraction in its simplest form $\frac{x-1}{4} - \frac{x-1}{3}$	
8 Write $0.9\dot{2}$ as a fraction in its simplest form.	
9 A, B, C and D are points on a circle. AC and BD meet at E. Angle BAC = 45° and angle ACD = 47°. Work out the size of angle x (angle AEB). Give reasons for your working. 	
10 Jug A contains 25 litres of a mixture of concentrate and water in the ratio 4 : 1. Jug B contains 11 litres of a mixture of concentrate and water in the ratio 5 : 6. The contents of both jugs are mixed together. Work out the ratio of concentrate to water in the mixture. Give your answer in its simplest form.	