Day 131	A Tier 10-a-day
1 Two fair dice are thrown. The two scores are added together. Work out the probability that the sum is less than 9.	
2 A triangle has sides of length 6 cm, 8 cm and 10 cm. Is the triangle right-angled? You must show your working.	
3 Ella invests £2000 in a savings account. (Calculator) The account pays 5% compound interest per year. Work out the amount in the account after 2 years.	
4 Simplify fully (a) $\frac{9x^6y^3}{5x^5y}$ (b) $(2x^4y^2)^3$	
5 Change 0.1 cm^2 to mm^2.	

Day 131	A Tier 10-a-day
6 A ladder of length 5 m rests against a vertical wall. (Calculator) The foot of the ladder is 2 m from the wall on horizontal ground. Work out the angle between the ladder and the ground. Give your answer to 1 decimal place.	
7 (a) Show that $0.\dot{6}\dot{2} = \frac{62}{99}$ (b) Hence write $4.\dot{6}\dot{2}$ as a mixed number in its simplest form.	
8 Ship A sails 15 km from a port on a bearing of 315°. Ship B sails 7 km from the same port on a bearing of 100°. (Calculator) Work out the distance between the two ships. Give your answer to 3 significant figures.	
9 A rectangle has width x cm and length (x + 3) cm. The area of the rectangle is 54 cm^2. (a) Show that $x^2 + 3x - 54 = 0$ (b) Work out the value of x.	
10 Priya invests £16,500 in a savings account. (Calculator) Compound interest is paid at a fixed rate each year. After 3 years the investment is worth £28,512. Work out the annual rate of interest.	