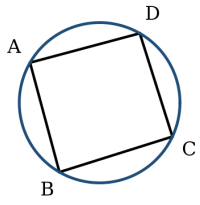
Day 21	A Tier 10-a-day
1 (a) Write down all the prime numbers between 90 and 104. (b) Write 95 as the product of two prime numbers.	
2 Solve the simultaneous equations $-5x + 3y = -37$ $-2x + 2y = -18$	
3 A cylinder has radius 10 cm and volume 700π cm^3. Work out the height of the cylinder.	
4 Isla and Jack share 90 football cards in the ratio 8 : 1. How many more football cards does Isla get than Jack?	
5 No tax is paid on the first £12,500 of income. Tax of 20% is paid on the next £28,000. Tax of 45% is paid on all income above £40,500. (Calculator) Aisha earns £57,000 a year. Work out the income tax paid.	

Day 21	A Tier 10-a-day
6 A bag contains 2 red, 3 blue and 5 green counters. Two counters are taken at random without replacement. Work out the probability that the two counters are different colours.	
7 A rectangle has width x cm and length (x + 1) cm. The area of the rectangle is 90 cm^2. (a) Show that $x^2 + 1x - 90 = 0$ (b) Work out the value of x.	
8 Write $5^3 \times (5^7)^6$ as a single power of 5.	
9 A, B, C and D are points on a circle. Angle A = (3x + 15)° and angle C = (4x + 25)°. (a) Work out the value of x. (b) Work out the size of angle A. The diagram is not drawn accurately. 	
10 Solve the simultaneous equations $x^2 + y^2 = 100$ $y = x + 2$	