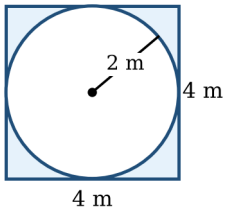
Day 15	B Tier 10-a-day
1 Expand (a) 8(3x + 2) (b) 2x(x + 6)	
2 8 apples cost £2. (a) Work out the cost of 6 apples. (b) How many apples can be bought for £1.50?	
3 Find the (a) highest common factor (HCF), (b) lowest common multiple (LCM) of 42 and 18.	
4 (a) The point P(−3, −1) is rotated 180° about the origin. Write down the coordinates of the image. (b) The point P(−3, −1) is reflected in the line y = −x. Write down the coordinates of the image.	
5 The price of a laptop is £60. The price is first reduced by 40%, then the new price is reduced by 20%. (a) Work out the final price. (b) Work out the overall percentage decrease in the price.	

Day 15	B Tier 10-a-day
6 In a room, the ratio of cats to dogs is 3 : 7. There are 49 dogs. More cats join so that there are equal numbers of cats and dogs. How many cats join?	
7 The diagram shows a square of side 4 m with a circle of radius 2 m cut out. (Calculator) The circle is in the centre of the square. Work out the area of the shaded region. Give your answer correct to 1 decimal place. The diagram is not drawn accurately. 	
8 The equation $x^3 - 2x = 24$ has a solution between 3 and 4. (Calculator) Use trial and improvement to find this solution. Give your answer correct to 1 decimal place.	
9 Shampoo is sold in two sizes. Small: 200 ml for 46p Large: 300 ml for 57p Which size is better value for money? You must show your working.	
10 Triangle PQR is isosceles with PQ = PR = 19 m. (Calculator) The base QR = 30 m. Work out the size of angle PQR. Give your answer correct to 1 decimal place.	