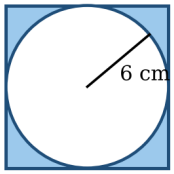
Day 86	A Tier 10-a-day
1 Here are the ages, in years, of 11 people. 30 51 62 37 31 73 9 55 74 79 78 (a) Work out the median. (b) Work out the interquartile range.	
2 A radio mast is at point A. Its signal reaches up to 6 km. A radio mast at B reaches up to 8 km. Describe the region where both signals can be received.	
3 The exchange rate is £1 = €1.15. (Calculator) A hotel room costs €138 a night. Work out the cost in pounds.	
4 4 adult tickets and 1 child ticket cost £37. 3 adult tickets and 2 child tickets cost £39. Work out the cost of one adult ticket.	
5 (a) A train leaves London at 1550. The journey takes 4 hours 13 minutes. Work out the time it ends. (b) Change 2.75 hours into hours and minutes.	

Day 86	A Tier 10-a-day

6 A scientist wants to estimate the number of frogs in a pond.
She catches 60 frogs, marks each one and returns them.
Later she catches a second sample of 40 frogs.
8 of these are marked.
Work out an estimate for the total number of frogs in a pond.

7 A circle of radius 6 cm fits exactly inside a square.
The circle touches all four sides of the square.
(Calculator)
Work out the area of the shaded region.
Give your answer to 3 significant figures.



8 Solve $\frac{x + 2}{2} + \frac{x + 5}{4} = 0$

9 The mean age of 12 workers is 60 years.
One of them, aged 16, leaves.
Work out the mean age of the remaining workers.

10 Solve $\frac{6}{(x + 2)} + \frac{6}{(x - 3)} = 1$