Day 12	A Tier 10-a-day
1 £1 = €1.2. (a) Change £80 to euros. (b) Change €288 to pounds.	
2 XY is a straight line of length 9 cm. A point P moves so that it is always less than 3 cm from the point X. Describe the region where P can be.	
3 Femi buys a watch for £200 and sells it for £270. Work out Femi's percentage profit.	
4 y is directly proportional to the square of x. When x = 4, y = 80. (a) Find a formula for y in terms of x. (b) Work out the value of y when x = 6.	
5 Here are four fractions: $\frac{5}{16}$ $\frac{5}{12}$ $\frac{11}{25}$ $\frac{6}{20}$ Which one of these fractions is equal to a recurring decimal?	

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6 $x_{n+1} = \sqrt[3]{11 - x_n}$ $x_0 = 2$ Work out the values of x_1, x_2 and x_3. Give your answers correct to 3 decimal places. (Calculator)	
7 The population of Region P is 3.75×10^6. The population of Region Q is 1.5×10^5. How many times bigger is the population of Region P than the population of Region Q?	
8 The mean mark of 8 boys in a test is 66. The mean mark of 8 girls in the same test is 67. Work out the mean mark of all 16 people.	
9 Make x the subject of $y = \frac{4x + 6}{x + 5}$	
10 Work out the value of x. (Calculator) Give your answer to 3 significant figures. The diagram is not drawn accurately.  	