Day 129	A Tier 10-a-day
1 (a) Write down all the prime numbers between 40 and 60. (b) Write 85 as the product of two prime numbers.	
2 Solve $4x^2 - 7x + 3 = 0$	
3 The price of a games console changes from £75 to £131.25. Work out the percentage increase.	
4 A tin of soup is a cylinder with radius 3 cm and height 11 cm. Work out the volume. Give your answer in terms of π.	
5 Solve $x^2 - 8x + 6 = 0$ by completing the square. Give your answers in surd form.	

Day 129 **A Tier 10-a-day**

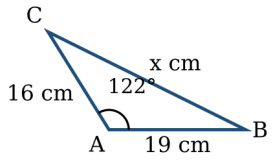
6 The table shows the distances, in km, travelled by 20 lorries.
(a) Write down the class that contains the median.
(b) Work out an estimate for the mean.

Distance, d (km)	Frequency
$20 < d \leq 30$	5
$30 < d \leq 40$	8
$40 < d \leq 50$	3
$50 < d \leq 60$	2
$60 < d \leq 70$	2

7 (a) Show that $0.\dot{1}\dot{8} = \frac{2}{11}$

(b) Hence write $5.\dot{1}\dot{8}$ as a mixed number in its simplest form.

8 Work out the value of x. (Calculator)
Give your answer to 3 significant figures.
The diagram is not drawn accurately.



9 $f(x) = 2x - 4$
$g(x) = x^2 + 4$
Solve $gf(x) = 85$

10 A solid is made from a cylinder and a hemisphere.
The cylinder has radius 6 cm and height 13 cm.
The hemisphere has the same radius as the cylinder and sits on top of it.
Work out the total volume. Give your answer in terms of π.