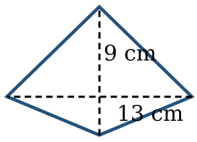
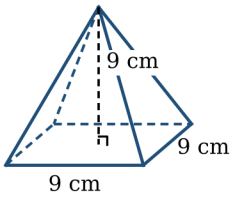
Day 51	A Tier 10-a-day
1 The diagram shows a kite. The diagonals are 13 cm and 9 cm and cross at right angles. Work out the area of the kite. The diagram is not drawn accurately.  	
2 A scientist wants to estimate the number of fish in a lake. She catches 60 fish, marks each one and returns them. Later she catches a second sample of 40 fish. 4 of these are tagged. Work out an estimate for the total number of fish in a lake.	
3 No tax is paid on the first £11,000 of income. Tax of 25% is paid on the next £35,000. Tax of 40% is paid on all income above £46,000. (Calculator) Femi earns £54,500 a year. Work out the income tax paid.	
4 Solve the simultaneous equations $-x + 2y = -1$ $4x + y = 22$	
5 The population of a village changes from 500 to 350. Work out the percentage decrease.	

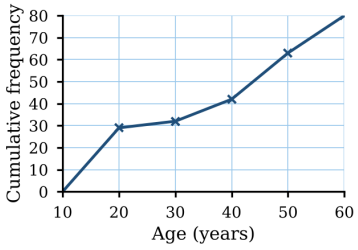
Day 51 **A Tier 10-a-day**

6 Solve $\frac{1}{(x-5)} + \frac{6}{(x+1)} = 1$

7 The diagram shows a pyramid with a square base of side 9 cm.
The perpendicular height of the pyramid is 9 cm.
Work out the volume of the pyramid.
The diagram is not drawn accurately.



8 The cumulative frequency graph shows information about the age of 80 visitors.
Use the graph to find an estimate for
(a) the median,
(b) the number of visitors with a age greater than 30 years.



9 A triangle has base 13 cm and perpendicular height 8 cm.
Each measurement is correct to the nearest cm.
Work out the lower bound for the area of the triangle.

10 Solve $x^2 - 13x + 30 \leq 0$