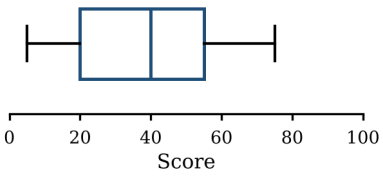
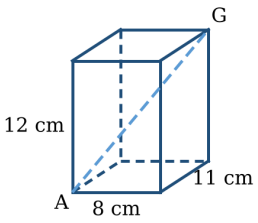
Day 98	A Tier 10-a-day
1 The ratio of red pens to blue pens in a box is 5 : 9. There are 44 more blue pens than red pens. Work out the number of red pens.	
2 A jug holds $1\frac{3}{4}$ litres of juice. Glasses hold $\frac{1}{8}$ litre each. How many glasses can be filled completely?	
3 The box plot shows the scores of the students in Class A in a test. (a) Write down the median and the interquartile range. For Class B the median is 50 and the interquartile range is 45. (b) Compare the distributions of the two classes. 	
4 Here are four fractions: $\frac{24}{45}$ $\frac{39}{120}$ $\frac{1}{2}$ $\frac{6}{20}$ Which one of these fractions is equal to a recurring decimal?	
5 Solve $4x^2 - x - 7 = 0$ Give your solutions correct to 2 decimal places. (Calculator)	

Day 98	A Tier 10-a-day
6 Expand and simplify $(4 - 3\sqrt{2})^2$ Give your answer in the form $a + b\sqrt{c}$	
7 Expand and simplify $(x + 1)(x - 1)(x + 4)$	
8 The diagram shows a cuboid. Work out the length of the diagonal AG. (Calculator) Give your answer to 3 significant figures. The diagram is not drawn accurately. 	
9 y is inversely proportional to x^2. When x = 8, y = 2. (a) Find a formula for y in terms of x. (b) Work out the positive value of x when y = 5.12.	
10 The diagram shows the cross-section of a metal pipe. The outer radius is 4 cm and the inner radius is 3 cm. The pipe is 15 cm long. Work out the volume of metal used. Give your answer in terms of π. 