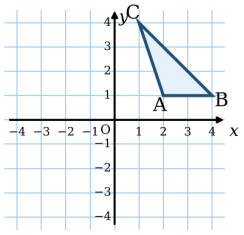
Day 173	B Tier 10-a-day

1 Juice is sold in two sizes.
Small: 300 ml for £1.29
Large: 450 ml for £2.20
Which size is better value for money?
You must show your working.

2 The diagram shows triangle ABC on a grid.
(a) Write down the coordinates of the image of A after a reflection in the line x = 1.
(b) Write down the coordinates of the image of B after a reflection in the line x = 2.



3 Expand
(a) 2(4x + 9)
(b) 3x(x − 2)

4 Write each number in standard form.
(a) 17,000,000
(b) 0.000065

5 In a bag of counters, the ratio of white to yellow is 4 : 3.
The ratio of yellow to red is 7 : 1.
Write down the ratio white : yellow : red.

Day 173	B Tier 10-a-day
6 A rectangle has length (4x + 6) cm and width (3x + 2) cm. The perimeter of the rectangle is 142 cm. (a) Work out the value of x. (b) Work out the area of the rectangle.	
7 Make h the subject of the formula $A = \frac{1}{2}bh$	
8 The length of a rectangle is 35 cm and its width is 18 cm. Both measurements are correct to the nearest cm. Work out the lower bound for the area of the rectangle.	
9 30 deer in a lake are caught, tagged and returned to the lake. Later, a sample of 30 deer is caught and 4 of them are tagged. Estimate the total number of deer in the lake.	
10 Show that $(2n + 13)^2 - (2n - 13)^2$ is a multiple of 104 for any whole number n.	