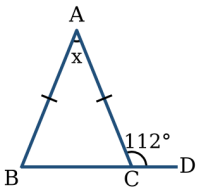
Day 316 **A Tier 10-a-day**

1 Solve $2x^2 - 5x - 9 = 0$
Give your solutions correct to 2 decimal places.
(Calculator)

2 The table shows information about 71 people.
One person is chosen at random.
(a) Find the probability that the person chose chicken.
(b) The person is a woman. Find the probability that they chose pasta.

	Chicken	Pasta	Total
Men	17	7	24
Women	20	27	47
Total	37	34	71

3 ABC is an isosceles triangle with AB = AC.
BCD is a straight line.
Angle ACD = 112°.
Work out the size of angle x.
The diagram is not drawn accurately.



4 Work out $\sqrt{1.21 \times 10^{-10}}$
Give your answer in standard form.

5 Two fair dice are thrown.
The two scores are added together.
Work out the probability that the sum is greater than 6.

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6 Here are the first five terms of a quadratic sequence. $-2, -5, -10, -17, -26$ (a) Find an expression for the nth term. (b) Work out the 8th term.	
7 Rationalise the denominator of $\frac{3}{3\sqrt{2}}$ Give your answer in its simplest form.	
8 An isosceles triangle has two equal sides of length $(4x + 3)$ cm and $(3x + 5)$ cm. The third side is 7 cm. Work out the perimeter of the triangle.	
9 Write as a single fraction $\frac{-5}{(x + 1)} - \frac{4}{(x + 5)}$	
10 A cyclist travels 410 metres in 17.8 seconds. The distance is correct to the nearest 10 metres and the time to the nearest 0.1 second. (a) Work out the upper bound and the lower bound of the speed in m/s. (b) Write the speed to a suitable degree of accuracy. Give a reason for your answer.	