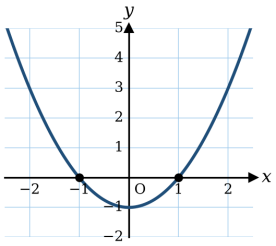
Day 144	A Tier 10-a-day
1 An isosceles triangle has two equal sides of length $(4x - 2)$ cm and $(2x + 14)$ cm. The third side is 9 cm. Work out the perimeter of the triangle.	
2 The exchange rate is £1 = A$1.95. (Calculator) A hotel room costs A$487.50 a night. Work out the cost in pounds.	
3 The diagram shows the graph of $y = x^2 + bx + c$. Find the value of b and the value of c. 	
4 $A = 2^3 \times 3^4 \times 5^3$ $B = 2^3 \times 3 \times 5^2$ Find the highest common factor (HCF) and the lowest common multiple (LCM) of A and B. Give your answers as products of prime factors.	
5 A spinner can land on red, blue or green. P(red) = 0.1 and P(blue) = 0.5. (a) Work out the probability that it lands on red or blue. (b) Work out the probability that it lands on green.	

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6 Make w the subject of z = 9(w + 5)	
7 PQR is a right-angled triangle with the right angle at Q. PQ = 10 cm and angle QPR = 30°. Work out the exact length of QR. Do not use a calculator.	
8 A bag contains red counters and blue counters in the ratio 1 : 6. 8 more blue counters are added to the bag. The ratio of red counters to blue counters is now 1 : 10. How many counters were in the bag at the start?	
9 n is the smallest positive integer such that 72 × n is a cube number. Find the value of n.	
10 The cumulative frequency graph shows information about the mass of 40 parcels. Use the graph to find an estimate for (a) the median, (b) the number of parcels with a mass greater than 90 kg. 