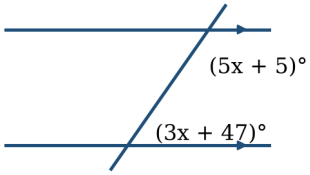
Day 2	A Tier 10-a-day
1 Here are the first four terms of a sequence. 12, 21, 30, 39 (a) Find an expression for the nth term. (b) Work out the 40th term.	
2 The diagram shows two parallel lines crossed by a straight line. (a) Work out the value of x. (b) Work out the size of the angle marked (5x + 5)°. The diagram is not drawn accurately. 	
3 (a) Write 110 and 30 as products of prime factors. (b) Find the highest common factor (HCF) and the lowest common multiple (LCM) of 110 and 30.	
4 A bag contains red counters and blue counters in the ratio 5 : 6. 8 more red counters are added to the bag. The ratio of red counters to blue counters is now 11 : 10. How many counters were in the bag at the start?	
5 m = 38.6 has been truncated to 1 decimal place. Write down the error interval for m.	

Day 2	A Tier 10-a-day
6 Without using a calculator, work out the exact value of $4 \cos 60° - 4 \tan 30°$ Give your answer in its simplest form.	
7 $f(x) = 3x - 2$ $g(x) = x^2 - 1$ Solve $gf(x) = 80$	
8 Isla and Nia each invest £5000 for 2 years. (Calculator) Isla's account pays 6% simple interest per year. Nia's account pays 6% compound interest per year. Work out how much more interest Nia earns than Isla.	
9 Solve $x^2 + 4x - 5 > 0$	
10 A bag contains 5 red counters and 5 blue counters. Three counters are taken at random without replacement. Work out the probability that all three counters are red.	