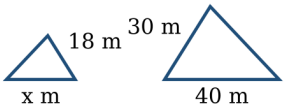
Day 181 **A Tier 10-a-day**

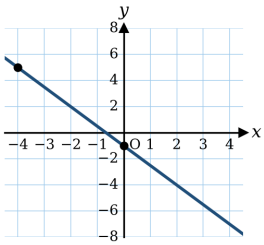
1 Ali buys a bookcase for £250.
He sells it for £237.50.
Work out his percentage loss.

2 The two triangles are similar.
Work out the value of x.
The diagrams are not drawn accurately.

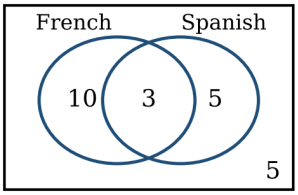


3 (a) Write 66 and 24 as products of prime factors.
(b) Find the highest common factor (HCF) and the lowest common multiple (LCM) of 66 and 24.

4 Find the equation of the straight line shown.
Give your answer in the form y = mx + c



5 Mo walks 8 km north and then 6 km east.
Work out the distance Mo is now from the starting point.

Day 181	A Tier 10-a-day
6 (a) Solve $-19 < 5x + 1 < 11$ (b) Write down all the integer values of x that satisfy this inequality.	
7 The Venn diagram shows information about 23 people. One person is chosen at random. (a) Find the probability that the person is in both French and Spanish. (b) Find the probability that the person is in French or Spanish or both. 	
8 A rectangle has width x cm and length (x + 2) cm. The area of the rectangle is 80 cm^2. (a) Show that $x^2 + 2x - 80 = 0$ (b) Work out the value of x.	
9 There are 21 students in a class. 14 students do drama and 11 students do choir. 4 students do neither. (a) Work out how many students do both. (b) One student is chosen at random. Find the probability that they do drama only.	
10 The price of a ticket is increased by 20% and then the new amount is decreased by 15%. Work out the overall percentage increase.	