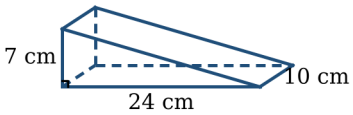
Day 35 **A Tier 10-a-day**

1 Hugo and Maya share £180 in the ratio 5 : 7.
How much more money does Maya get than Hugo?

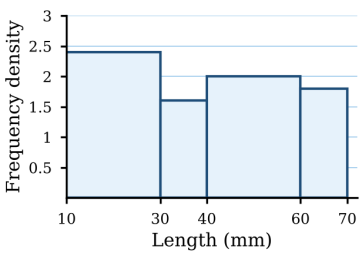
2 The diagram shows a triangular prism.
The cross-section is a right-angled triangle.
Work out the total surface area of the prism.
The diagram is not drawn accurately.



3 Expand and simplify
$(3x - 5)^2$

4 $A = 2^3 \times 5^3$
$B = 2 \times 3 \times 5^2$
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 The histogram shows information about the length of some items.
(a) Work out the number of items with a length in the class 10 to 30 mm.
(b) Work out an estimate for the number with a length greater than 50 mm.



Day 35	A Tier 10-a-day
6 The number of followers of a channel is increased by 10% and then the new amount is decreased by 20%. Work out the overall percentage decrease.	
7 A bag contains red counters and blue counters in the ratio 7 : 1. 22 more blue counters are added to the bag. The ratio of red counters to blue counters is now 7 : 3. How many counters were in the bag at the start?	
8 Expand and simplify $(x - 1)(x + 3)(x + 4)$	
9 In a sale, all prices are reduced by 6%. (Calculator) A watch costs £408.90 in the sale. Work out the original price of the watch.	
10 Ship A sails 22 km from a port on a bearing of 320°. Ship B sails 7 km from the same port on a bearing of 285°. (Calculator) Work out the distance between the two ships. Give your answer to 3 significant figures.	