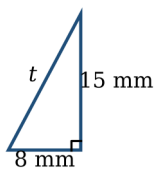
Day 166	B Tier 10-a-day
1 Work out (a) $\frac{3}{10} + \frac{1}{4}$ (b) $\frac{3}{4} - \frac{3}{5}$ Give each answer in its simplest form.	
2 Factorise fully $6x^2 - 4x$	
3 (a) Write down all the prime numbers between 21 and 33. (b) Explain why 27 is not a prime number.	
4 Electricity costs 18p per unit. There is also a standing charge of £10. Work out the total bill for 350 units.	
5 Work out the length of t. The diagram is not drawn accurately. 	

Day 166	B Tier 10-a-day
6 Matchsticks are used to make a row of triangles. 1 triangle needs 3 matchsticks, 2 triangles need 5 and 3 triangles need 7. (a) Find an expression, in terms of n, for the number of matchsticks needed for n triangles. (b) Dan uses 57 matchsticks to make a row. How many triangles are in his row?	
7 60 snails in a lake are caught, tagged and returned to the lake. Later, a sample of 80 snails is caught and 12 of them are tagged. Estimate the total number of snails in the lake.	
8 Estimate the value of $\frac{72.5 \times 0.931}{0.131}$ Show your rounding to 1 significant figure.	
9 Triangle ABC is isosceles with AB = AC = 15 cm. The base BC = 18 cm. (a) Work out the perpendicular height of the triangle. (b) Work out the area of the triangle.	
10 A boat travels at 108 km/h. Work out its speed in metres per second.	