Day 272	B Tier 10-a-day
1 Work out (a) $8^2 - (30 - 23) \times 3$ (b) $(9 + 11) \times 4 - 2$	
2 A club has 8 members. They choose a head girl and a deputy head girl from the members. The two jobs must be done by different people. How many different ways can the jobs be given out?	
3 Q is north-east of P. (a) Write down the bearing of Q from P. (b) Work out the bearing of P from Q.	
4 Work out the value of $38 - x^2$ when $x = -3$	
5 A block of ice is a cuboid measuring 5 cm by 6 cm by 2 cm. The density of ice is 0.9 g/cm^3. Work out the mass of the block.	

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6 C is directly proportional to t. When t = 4, C = 28. Find the value of C when t = 20.	
7 (a) Farah scores 47 out of 50 in a test. Write this as a percentage. (b) Write £1 as a percentage of £2.	
8 A triangle has sides of length x cm, (x + 6) cm and (2x − 3) cm. The perimeter of the triangle is 23 cm. (a) Work out the value of x. (b) Work out the length of the longest side.	
9 A cone has base radius 5 m and vertical height 7 m. (Calculator) Volume of a cone = $\frac{1}{3}\pi r^2 h$ Work out the volume of the cone. Give your answer correct to 1 decimal place.	
10 A rectangle has length (x + 4) cm and width (x − 2) cm. The area of the rectangle is 91 cm^2. (a) Show that $x^2 + 2x - 99 = 0$ (b) Hence work out the length of the rectangle.	