Day 105 **B Tier 10-a-day**

1 The table shows some information about 82 students.
A person is chosen at random.
Find the probability that the person is in the group "Girls" and chose "Walk".

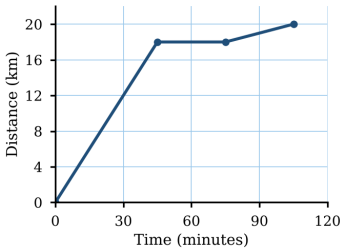
	Walk	Bus	Total
Boys	24		37
Girls		28	
Total			82

2 A triangle has sides of length 5 m, 12 m and 14 m.
Is the triangle right-angled?
You must show your working.

3 A scooter leaves at 7:40 am.
It travels 108 km at an average speed of 36 km/h.
At what time does it arrive?

4 The exchange rate is £1 = $1.3. (Calculator)
(a) Change £300 to dollars.
(b) Change $130 to pounds (£).

5 The graph shows Jack's journey.
(a) How far did Jack travel in the first 45 minutes?
(b) Work out Jack's speed in the last 30 minutes. Give your answer in km/h.



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6 Work out (a) 3^{-3} (b) $11^0 + \sqrt{100}$	
7 Solve $\frac{3x}{2} = 3$	
8 In triangle ABC, AB = 19 cm, BC = 18 cm and angle ABC = 110°. (Calculator) Work out the area of the triangle. Give your answer correct to 1 decimal place.	
9 The equation $x^3 + 3x = 105$ has a solution between 4 and 5. (Calculator) Use trial and improvement to find this solution. Give your answer correct to 1 decimal place.	
10 A boat sails 14 m on a bearing of 270° from P to Q, then 6 m on a bearing of 000° to R. (Calculator) (a) Work out the distance PR. (b) Work out the bearing of R from P. Give your answers correct to 1 decimal place. 