Day 324 **A Tier 10-a-day**

1 (a) A coach leaves Leeds at 1345. The journey takes 1 hours 13 minutes. Work out the time it ends.
(b) Change 3.8 hours into hours and minutes.

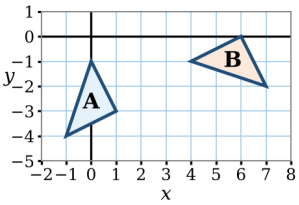
2 Here are the first four terms of a sequence.
8, 15, 22, 29
(a) Find an expression for the nth term.
(b) Work out the 50th term.

3 Here are the ages, in years, of 11 people.
22 19 20 70 11 18 72 61 29 21 9
(a) Work out the median.
(b) Work out the interquartile range.

4 Oscar buys a watch for £260 and sells it for £312.
Work out Oscar's percentage profit.

5 The stem and leaf diagram shows the ages of 11 people.
Key: 1 | 4 represents 14 years
(a) Work out the median age.
(b) Work out the interquartile range.

Stem	Leaf
1	4 9
2	0 2 7
3	1 2 4 6 8
4	7

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6 Describe fully the single transformation that maps shape A onto shape B.  	
7 The value of a painting increases by 20% each year. (Calculator) After 2 years it is worth £2,160. Work out its value at the start.	
8 Nia invests £2000 in a savings account. (Calculator) The account pays compound interest at a fixed rate each year. After 2 years there is £2420 in the account. Work out the annual rate of interest.	
9 Make x the subject of $y = 3\sqrt{x} + 4$	
10 Boat P sails 24 km from a harbour on a bearing of 170°. Boat Q sails 21 km from the same harbour on a bearing of 210°. (Calculator) Work out the distance between the two boats. Give your answer to 3 significant figures.	