

## Thinking a little differently...

### Applying Mental Maths at the Railway

#### Student Introduction

- ▶ The Isle of Wight Steam Railway is a working railway.
- ▶ It shows us what the steam era of rail was like on the Isle of Wight.



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Mathematics is a very important part of the curriculum relevant materials supporting school trips to the Isle of Wight environment!  
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### Addition & Subtraction Problems

Question	+/- Calculation	Answer
1. How many third class carriage doors are there are on your train today?		
2. If a train has 80 seats, and 39 people get on, how many spare seats remain?		
3. An adult ticket costs £13, and a child ticket costs £3.50. How much will it cost for 2 adults and 1 child?		
4. A train has seats for 120 passengers. As it pulls into Havenstreet, the train already has 61 passengers on board. Then 45 passengers get on the train. How many free seats are left?		
5. The first steam train service on the Isle of Wight operated in 1862. The last steam service operated in 1966. For how many years did the steam service operate?		
6. In 1989, newer old tube stock (London Underground) trains were introduced on Island Line. How many years have they now been running?		

## Multiplication & Division Problems

Question	$\times / \div$ Calculation	Answer
1. When Burt shovels coal into the engine furnace or 'firebox', he delivers an average of 20 pieces of coal. The engine needs 200 pieces of coal per mile. How many shovelfuls does he need to deliver for a 5 mile journey?		
2. If a train carriage has 30 seats, how many carriages will be required for 130 passengers, if they are all to be seated?		
3. The water compartment of the steam train holds 80 gallons of water. On average, the train converts 7 gallons of water into steam per mile travelled. How many miles can the train travel before it needs to be refilled?		
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4b. If two-thirds of these visitors were children, how many adults visited in the year?		
5. In the <i>T-Junction Garden Kiosk</i> , 36 strawberry ice-creams are sold each day. The ice-creams are supplied in boxes of 12. How many boxes do they need to order each week?		
6a. There are 50 red days on the timetable per year, when 2 trains run 10 times each per day. There are also 50 blue days on the timetable each year, where only 1 train runs, 6 times per day. How many trains run each year?		
6b. If each train can hold 100 passengers, what is the maximum carrying capacity in those 100 days?		

