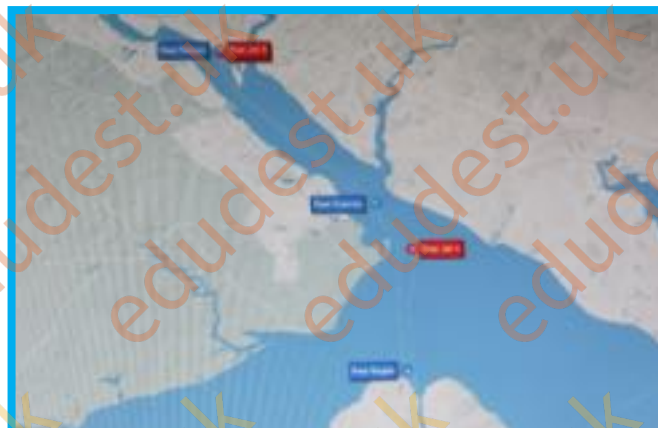


## Ferry Crossing Maths Challenge!

Can you work mathematically and solve the problem?

### Student Introduction

- ▶ In this investigation you will read timetables and create charts on which to plot and subsequently interpolate a variety of data in order to solve a problem.



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For maximum effect, it would be best to select crossings that cross paths with the most other ferries.

Your challenge? To help Red Funnel select which ferry crossings would be best and demonstrate why this is the case.

### Outcomes

- ✓ You need to produce a chart from which you can extract the information you need - this is known as interpolation.
- ✓ You should be ready to present your findings at a given time showing a clear and accurate chart/diagram in addition to explaining your findings and solutions.

### Extension

#### C.A.F.

#### Consider All Factors

- Would this be the same if it were a public holiday?
- For maximum viewing from the Red Jets, which side of the vehicle ferry would be best to use for the display?
- What other factors need to be considered?
- Can you come up with a solution to any further problems you can think of?

# Help Sheet

107452

Your graph/diagram needs to show:

1. How many times the Red Jet will pass a vehicle ferry
2. Where that passing is likely to take place
3. At roughly what time the vehicle ferries pass each other

- ▶ One axis will need to show times from 19.00 - 00.00.
- ▶ Draw it out on squared paper showing 00, 15, 30 and 45 minutes past the hour.
- ▶ You could repeat this line parallel so one line represents Cowes and the other represents Southampton:

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19.00

### Key Considerations

- ▶ **How can you plot the ferries' paths?**  
*Use the departure times given on the timetable.*
- ▶ **How can you work out the arrival times from the information given on the web site?**  
*Plot the journeys of all the vehicle ferries.*

Now do the same for the Red Jet.

- ▶ **How can you show the difference between the Red Jet and the vehicle ferries clearly on your chart?**
- ✓ **Now, can you see when the Red Jets pass the vehicle ferries?**
- ✓ **Look back at the bullet points on the top of this sheet - can you answer them now, using your chart?**





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