## Student Activity on Midpoint

Use in connection with the interactive file "Midpoint" on the Student's CD.
To explore the midpoint of two points that are on horizontal and vertical number lines


1. For each number line move the red dots to the midpoint of the blue dots
2. Fill in the table for all the horizontal number lines:

| Column 1 | Column 2 | Column 3 | Column 4 | Column 5 |
| :---: | :---: | :---: | :---: | :---: |
| Number where the left blue dot is | Number where the right blue dot is | Mean of the two numbers | Number <br> where the red <br> dot is when <br> you move it to <br> the midpoint | Are the answers in columns 3 and <br> 4 the "same" <br> or "different"? |
| 2 | 6 | $\text { Mean }=\frac{2+6}{2}=\frac{8}{2}=4$ |  |  |
| 1 | 9 |  |  |  |
| 0 | 8 |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
| -9 | -1 |  |  |  |

Draft 01 © Project Maths Development Team 2011 Midpoint
3. Untick the "Horizontal Number Lines" box and tick the "Vertical Number Lines" box.
4. For each number line move the red dots to the midpoint of the blue dots
5. Fill in the table for all the vertical number lines:

| Column 1 | Column 2 | Column 3 | Column 4 | Column 5 |
| :---: | :---: | :---: | :---: | :---: |
| Number where the bottom blue dot is | Number where the top blue dot is | Mean of the two numbers | Number where the red dot is when you move it to the midpoint | Are the answers in columns 3 and 4 the "same" or "different"? |
| 2 | 8 | $\text { Mean }=\frac{2+8}{2}=\frac{10}{2}=5$ |  |  |
| 1 | 7 |  |  |  |
| -1 | 3 |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
| 1 | 5 |  |  |  |

6. If you were organising a cycle race that started in one town and ended in a town

40 km away and you felt it was a good idea to have one water station somewhere along the route where would you place the water station?

