TRIAL AND IMPROVEMENT – PRACTICE QUESTIONS

1.
A solution to the equation \(2x^2 + 7x - 3 = 0\) lies between 0 and 1.

Use trial and improvement to find this solution to 1 decimal place. The table has been started for you.

<table>
<thead>
<tr>
<th>x</th>
<th>Value</th>
<th>Too big or too small?</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.4</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2.
A solution to the equation \(3x^2 - 5x + 1 = 0\) lies between 1 and 2.

Use trial and improvement to find this solution to 1 decimal place.

<table>
<thead>
<tr>
<th>x</th>
<th>Value</th>
<th>Too big or too small?</th>
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<tbody>
<tr>
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3.
A solution to the equation \(3x^3 - 5x^2 = 23\) lies between 2 and 3.

Use trial and improvement to find this solution to 1 decimal place.

<table>
<thead>
<tr>
<th>x</th>
<th>Value</th>
<th>Too big or too small?</th>
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<tbody>
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</table>
4. A solution to the equation $6x^3 + 5x = 50$ lies between 1 and 2.
Use trial and improvement to find this solution to 1 decimal place.

5. A solution to the equation $x^3 + 6x^2 - 5x = 75$ lies between 3 and 4.
Use trial and improvement to find this solution to 1 decimal place.
6. A solution to the equation $x^3 - 4x^2 + 11x = 90$ lies between 5 and 6.

Use trial and improvement to find this solution to 1 decimal place.

7. A solution to the equation $3x^3 + 10x^2 - 12x = 50$ lies between 2 and 3.

Use trial and improvement to find this solution to 1 decimal place.
8. A solution to the equation $5x^2 - 11x = 15$ lies between 3.1 and 3.2.

Use trial and improvement to find this solution to 2 decimal places.

9. A solution to the equation $3x^3 + 4x^2 + 5x = 100$ lies between 2.6 and 2.7.

Use trial and improvement to find this solution to 2 decimal places.
10.  
A solution to the equation $2x^3 + 9x + 15 = 0$ lies between -2 and -1.  

Use trial and improvement to find this solution to 1 decimal place.

11.  
A solution to the equation $2x^3 + 5x + 100 = 0$ lies between -4 and -3.  

Use trial and improvement to find this solution to 1 decimal place.
12. A solution to the equation \(2x^3 - 11x^2 - 22x + 16 = 0\) lies between 6 and 7.

Use trial and improvement to find this solution to 1 decimal place.

13. A solution to the equation \(3x^3 - 2x^2 + 9x - 9 = 0\) lies between 0.9 and 1.0.

Use trial and improvement to find this solution to 2 decimal places.