You found a treasure map that contains information to find hidden treasures. The map is a grid with rows labelled with letters and columns labelled with numbers. Each square of the grid is identified by a unique name such as B3 or D5 and contains either a number or a ⋄.

Under some of the ⋄ spots on the grid, there is hidden treasure. To find the treasure, you must know the rules of the map and be given a correct starting position.

**Here are the rules:**

- You will be given a starting position including:
  a starting square that contains a number and
  a starting direction which indicates how you start moving in the map (e.g., A3 ↓).

- From the starting position, move through the grid in the given direction, accumulating the sum of the numbers in the squares that you pass through (including the one on the starting square). Let’s call this accumulated sum $S$.

- When you reach a square containing a ⋄, there are four possibilities:
  - If $S$ is even and its leftmost digit is even (e.g., $S = 24$), then you make a quarter turn (90°) counterclockwise and continue accumulating sums along this new path.
  - If $S$ is even and its leftmost digit is odd (e.g., $S = 34$), then you make a quarter turn clockwise and continue accumulating sums along this new path.
  - If $S$ is odd and its leftmost digit is even (e.g., $S = 45$), then you will keep moving in the same direction and continue accumulating sums along the same path.
  - If $S$ is odd and its leftmost digit is odd (e.g., $S = 125$), then you have found a treasure!

- While you continue searching for treasure, the accumulated sum $S$ continues to grow. Keep moving through the map, changing directions at the squares containing a ⋄ symbol when necessary, until you find a treasure.

**Example:** Suppose you have the Partial Map above and you are given the starting position A3 ↓. This is the path that you would take through the map:

You start at square A3 and move downwards in the map.
You move from A3 to B3 to C3 and accumulate a sum of $S = 13 + 15 = 28$ when you reach your first ⋄ spot.
Since 28 is even and its leftmost digit is even, you make a quarter turn counterclockwise, making your new direction →.
From square C3 you move to the right in the map.
You move from C3 to C4 to C5 to C6 and accumulate a sum of $S = 28 + 1 + 4 = 33$ when you reach your second ⋄ spot.
Since 33 is odd and its leftmost digit is odd, you have found a treasure at square C6!
Here is the complete treasure map.

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
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<tbody>
<tr>
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<td>13</td>
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<td>6</td>
<td>◊ 12</td>
<td>4</td>
<td>◊ 9</td>
<td></td>
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<td>9</td>
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<td>15</td>
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<td>◊ 8</td>
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<tr>
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<td>24</td>
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<td>12</td>
</tr>
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<td>◊ 21</td>
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<td>◊ 12</td>
<td>◊</td>
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</tr>
<tr>
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<td>5</td>
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<tr>
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<td>◊ 14</td>
<td>◊ 8</td>
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<tr>
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<td>3</td>
<td>9</td>
<td>10</td>
<td>11</td>
</tr>
</tbody>
</table>

**Problem 1**
The starting position **J6 ↑** will lead you to a second treasure. Find where this treasure is located.

**Problem 2**
The starting position **C1 →** will lead you to a third treasure. Find where this treasure is located.

**Let the treasure hunt begin!**

*Feel free to explore other starting positions on the grid. If from some starting position you happen to reach the end of the grid without an instruction to turn (and without finding a treasure), then stop and start again with another starting position.*

**More Info:**
Check out the CEMC at Home webpage on Wednesday, June 17 for a solution to Treasure Hunt.