INVESTIGATION

The effects of \( m \) and \( c \) on a straight line graph

On the same set of axes, plot the following graphs:

1. \( y=x-2 \)
2. \( y=x-1 \)
3. \( y=x \)
4. \( y=x+1 \)
5. \( y=x+2 \)

a. Make table of values and use \( x \) values from -2 to 2
b. Use different colors to join the lines.
c. Use the graph paper given below

<table>
<thead>
<tr>
<th>( x )</th>
<th>-2</th>
<th>-1</th>
<th>0</th>
<th>1</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>( y=x-2 )</td>
<td>-4</td>
<td>-3</td>
<td>-2</td>
<td>-1</td>
<td>0</td>
</tr>
<tr>
<td>( y=x-1 )</td>
<td>-3</td>
<td>-2</td>
<td>-1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>( y=x )</td>
<td>-2</td>
<td>-1</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>( y=x+1 )</td>
<td>-1</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>( y=x+2 )</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>
Key

- Red: $y = x$
- Green: $y = x - 1$
- Black: $y = x - 2$
- Blue: $y = x + 1$
- Purple: $y = x + 2$