Exam Style Questions

Drawing linear graphs

Corbettmaths

Ensure you have: Pencil, pen, ruler, protractor, pair of compasses and eraser
You may use tracing paper if needed

Guidance

1. Read each question carefully before you begin answering it.
2. Don’t spend too long on one question.
3. Attempt every question.
4. Check your answers seem right.
5. Always show your workings

Revision for this topic

www.corbettmaths.com/contents

Video 186
Video 187
Video 192
Video 193

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(a) On the grid, draw the graph of $x = 3$.  

(1)

(b) On the grid, draw the graph of $y = 1$.  

(1)

(c) Write down the coordinates of where the two lines met.  

$\frac{3}{(\ldots , \ldots)}$  

(1)
2.  (a) Complete the table of values for $y = 2x + 4$.

<table>
<thead>
<tr>
<th>$x$</th>
<th>-1</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>$y$</td>
<td>2</td>
<td>4</td>
<td>6</td>
<td>8</td>
<td>10</td>
</tr>
</tbody>
</table>

(b) On the grid, draw the graph of $y = 2x + 4$ for values of $x$ from $-1$ to $3$. 

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3.

(a) On the grid, draw the graph $y = -2$.

(b) Complete the table of values for $y = 3x + 1$.

<table>
<thead>
<tr>
<th>$x$</th>
<th>-1</th>
<th>0</th>
<th>1</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>$y$</td>
<td>$-2$</td>
<td>1</td>
<td>4</td>
<td>7</td>
</tr>
</tbody>
</table>

(c) On the grid, draw the graph of $y = 3x + 1$. 

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4.

(a) Complete the table of values for \( y = \frac{1}{2} x + 1 \)

<table>
<thead>
<tr>
<th>( x )</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>( y )</td>
<td>1</td>
<td>1.5</td>
<td>2</td>
<td>2.5</td>
<td>3</td>
</tr>
</tbody>
</table>

(b) On the grid, draw the graph of \( y = \frac{1}{2} x + 1 \).
5. (a) Complete the table of values for \( y = -2x + 11 \).

<table>
<thead>
<tr>
<th>( x )</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>( y )</td>
<td>11</td>
<td>9</td>
<td>7</td>
<td>5</td>
<td>3</td>
<td>1</td>
</tr>
</tbody>
</table>

(b) On the grid, draw the graph of \( y = -2x + 11 \) for values of \( x \) from 0 to 5.
6. (a) Complete the table of values for \( y = 6 - 4x \).

<table>
<thead>
<tr>
<th>( x )</th>
<th>-1</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>( y )</td>
<td>10</td>
<td>6</td>
<td>2</td>
<td>-2</td>
<td>-6</td>
</tr>
</tbody>
</table>

(b) On the grid, draw the graph of \( y = 6 - 4x \) for values of \( x \) from -1 to 3.

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7.

(a) Complete the table of values for the graph \( x + y = 6 \)

<table>
<thead>
<tr>
<th>x</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>y</td>
<td>6</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
</tbody>
</table>

(b) On the grid, draw the graph of \( x + y = 6 \).
8. (a) Complete the table of values for \( y = 3x + 3 \).

<table>
<thead>
<tr>
<th>( x )</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>( y )</td>
<td>3</td>
<td>6</td>
<td>9</td>
<td>12</td>
<td>15</td>
<td>18</td>
</tr>
</tbody>
</table>

(b) On the grid draw the graph of \( y = 3x + 3 \) values of \( x \) from 0 to 5.
9. (a) Complete the table of values for $4x + y = 20$.

<table>
<thead>
<tr>
<th>$x$</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>$y$</td>
<td>20</td>
<td>16</td>
<td>12</td>
<td>8</td>
<td>4</td>
<td>0</td>
</tr>
</tbody>
</table>

(b) On the grid draw the graph of $4x + y = 20$ values of $x$ from 0 to 5.
10. (a) Complete the table of values for \( y = 4x + 2 \).

\[
\begin{array}{c|c|c|c|c|c|c}
 x & -1 & 0 & 1 & 2 \\
 y & -2 & 2 & 6 & 10 \\
\end{array}
\]

(b) On the grid, draw the graph of \( y = 4x + 2 \).

(c) Use your graph to solve \( 4x + 2 = 0 \).
Explain how you obtained your answer.

Answer \( x = \ldots \cdot 5 \).

Reason \( \ldots \) I found where the graph crosses the \( x \)-axis \( \ldots \) (as \( y = 0 \)) \( \ldots \).
11. (a) On the grid draw the graph of \( y = 2x \) for the values of \( x \) from \(-2\) to \(3\).

\[
\begin{array}{c|c|c|c|c}
   x & 0 & 1 & 2 & 3 \\
   \hline
   y & 0 & 2 & 4 & 6 \\
\end{array}
\]

\[
\begin{array}{c|c|c|c|c}
   x & -2 & -1 \\
   \hline
   y & -4 & -2 \\
\end{array}
\]

(b) Draw the graph \( y = -3 \) on the grid.

(c) Write down the coordinates of the point of intersection of the two graphs.

\((.........., .........)\)
12. On the grid below, draw the graph of $y = 6 - x$

<table>
<thead>
<tr>
<th>$x$</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>$y$</td>
<td>6</td>
<td>5</td>
<td>4</td>
<td>3</td>
</tr>
</tbody>
</table>
13. Draw the graph \( y = 4x - 2 \) on the grid below.

\[
\begin{array}{c|cccc}
  x & -1 & 0 & 1 & 2 & 3 \\
  y & -6 & -2 & 2 & 6 & 10 \\
\end{array}
\]
14. Draw the graph \( y = 4 - 3x \) on the grid below.

\[
\begin{array}{c|cccc}
    x & 0 & 1 & 2 & 3 \\
    \hline
    y & 4 & 1 & -2 & -5 \\
\end{array}
\]
15. On the grid draw the graph of $y = 10 - 2x$ for the values of $x$ from $-1$ to $5$. 

<table>
<thead>
<tr>
<th>$x$</th>
<th>-1</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>$y$</td>
<td>12</td>
<td>10</td>
<td>8</td>
<td>6</td>
<td>4</td>
<td>2</td>
<td>0</td>
</tr>
</tbody>
</table>

(3)
16. On the grid below draw the graph of $y = 3x - 1$ for the values of $x$ from 0 to 5.

<table>
<thead>
<tr>
<th>$x$</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>$y$</td>
<td>-1</td>
<td>2</td>
<td>5</td>
<td>8</td>
<td>11</td>
<td>14</td>
</tr>
</tbody>
</table>
17. On the grid below draw the graph $2x + y = 10$

$$
\begin{array}{c|ccccc}
 x & 0 & 1 & 2 & 3 & 4 & 5 \\
 y & 10 & 8 & 6 & 4 & 2 & 0 \\
\end{array}
$$
18. On the grid, draw $y = 4x - 5$ for values of $x$ from $-2$ to $2$. 

<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>$y$</td>
<td>-13</td>
<td>-9</td>
<td>-5</td>
<td>-1</td>
<td>3</td>
</tr>
</tbody>
</table>
19. On the grid, draw the graph of $3x - 2y = 6$

<table>
<thead>
<tr>
<th>x</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>y</td>
<td>-3</td>
<td>-1.5</td>
<td>0</td>
<td>1.5</td>
<td>3</td>
</tr>
</tbody>
</table>

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