ALGEBRA 1 – MA1100
COURSE REVIEW (2)
Calculators Permitted

Use the following graph to answer questions 1 – 4.

1. Is the slope of line $k$ positive or negative? ______________________(3)

2. Determine the slope of line $k$. __________(3)

3. Give the $y$–intercept of line $k$ __________(3)

4. Which line has a slope of 0? __________(3)

5. Which table represents a line with a slope of $-\frac{1}{3}$? __________(3)

<table>
<thead>
<tr>
<th>A</th>
<th>x</th>
<th>y</th>
</tr>
</thead>
<tbody>
<tr>
<td>x</td>
<td>-1</td>
<td>3</td>
</tr>
<tr>
<td>y</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1</td>
<td>-3</td>
<td>-3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>B</th>
<th>x</th>
<th>y</th>
</tr>
</thead>
<tbody>
<tr>
<td>x</td>
<td>-3</td>
<td>1</td>
</tr>
<tr>
<td>y</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>3</td>
<td>-1</td>
<td>-1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>C</th>
<th>x</th>
<th>y</th>
</tr>
</thead>
<tbody>
<tr>
<td>x</td>
<td>-3</td>
<td>1</td>
</tr>
<tr>
<td>y</td>
<td>0</td>
<td>-1</td>
</tr>
<tr>
<td>3</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>D</th>
<th>x</th>
<th>y</th>
</tr>
</thead>
<tbody>
<tr>
<td>x</td>
<td>-1</td>
<td>-3</td>
</tr>
<tr>
<td>y</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>1</td>
<td>0</td>
<td>3</td>
</tr>
</tbody>
</table>
6. Which line has slope \(-2\)?

Which line has slope \(-2\)?

A  \[
\begin{array}{|c|c|}
\hline
\text{y} & \text{x} \\
\hline
-2 & 3 \\
\hline
\end{array}
\]

B  \[
\begin{array}{|c|c|}
\hline
\text{y} & \text{x} \\
\hline
3 & -2 \\
\hline
\end{array}
\]

C  \[
\begin{array}{|c|c|}
\hline
\text{y} & \text{x} \\
\hline
-2 & 3 \\
\hline
\end{array}
\]

D  \[
\begin{array}{|c|c|}
\hline
\text{y} & \text{x} \\
\hline
3 & -2 \\
\hline
\end{array}
\]

Matching. For problem 7 & 8, match the slope with the equation. Two answers will not be used.

A positive  B negative  C zero  D undefined

7. \(y = 4\) ______ (3)

8. \(x = -4\) ______ (3)

Use the graph to the right to answer questions 9 & 10.

9. The following point(s) are not in the solution set. There may be more than one answer; give all correct answers.

A \((4, -1)\)  B \((-1, 4)\)  ______ (6)

C \((-1, 2)\)  D \((1, 2)\)

10. Which inequality represents the graph? ______ (6)

A \(y < 2x + 4\)  B \(y \leq 2x + 4\)

C \(y > 2x + 4\)  D \(y \geq 2x + 4\)
Use the following equation to answer questions 11 & 12.

\[ y = -2x + 4 \]

11. The \( y \)-intercept is \[ \text{____________} \] (3)

12. The slope is \[ \text{____________} \] (3)

For problems 13 – 18, sketch the graph and shade, if required.

13. \( y < \frac{-1}{3}x + 2 \) (9)

14. \( x = 4 \) (3)

15. \( y \geq -x + 1 \) (9)

16. \( y \leq -3 \) (6)

17. \( y = 2x - 4 \) (6)

18. \( y = 3x \) (6)