Slope and Equations of Lines

In this worksheet, you will interpret slope from graphs and from given points and use it to write down equations of lines.

Instructions: For all of the graphs on this worksheet, if a line appears to go through a point with whole number coordinates, you can assume that it really does (and not that it just comes close to that point).

1 Use the graph at right to answer these questions.
(a) What is the y-intercept of the line?

\[ b = \]

(b) Using the two points on the line indicated by the dots, what are the change in y and the change in x?

\[ \Delta y = \]
\[ \Delta x = \]

(c) What is the slope of this line?

\[ m = \]

(d) Write down an equation for the line.

\[ y = \]

2 Write down an equation for the line shown in the graph below.
3. Find the slope of a line through the two points (3, -1) and (5, 2).

4. Find the equation of a line through the points (0, 4) and (2, 0). (Hint: One of these points corresponds to the y-intercept.)

5. Find the equation of a line through the points (2, -1) and (-3, 5).

6. On the grid below, carefully draw the line that goes through the points (2, 3) and (2, 5). Then write down the equation of that line.

\[ \text{equation: } \]