***MPM1D Finding Equations and Properties of Lines***

1. Find the equation of a line that:

|  |  |
| --- | --- |
| a) Has a slope of 4, and passes through the point (–3, 5) | b) Has a slope of , and passes through the point (8, 5) |
| c) Passes through the points (6, –4) and (2, –12) | d) Passes through the points (–6, 10) and (4, –5) |

1. Here are the equations of two lines. Complete the table below.

|  |  |
| --- | --- |
| **LINE A:** | **LINE B:** |

|  |  |  |  |
| --- | --- | --- | --- |
| a) The slope of Line A | b) The slope of Line B | c) the y-intercept of Line A | d) the y-intercept of Line B |
| e) The equation of a new line with the same slope as Line A | | f) The equation of a new line with the same y-intercept as Line B | |
| g) The equation of a line that is parallel to Line B | | h) The equation of a line with the same slope as Line A, and the same y-intercept as Line B | |
| i) The slope of a line that is perpendicular to Line B | | j) The equation of a line that is perpendicular to line A, with a y-intercept of 10 | |

3. Here are the equations of two more lines. Complete the table below.

|  |  |
| --- | --- |
| **LINE C:** | **LINE D:** |

|  |  |
| --- | --- |
| a) The slope of Line C (hint: rearrange!) | b) The y-intercept of Line D |
| c) The equation of a line that is parallel to line C, and passes through (9, –2) | d) The equation of a line that is perpendicular to Line C, with the same y-intercept as Line D |