***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.

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

|  |  |
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| 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 |