Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_\_

Homework sheet: Alg2H

Lines, slopes, and more: Intro 2

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| 1. (Book1 249\*\*) Let and .    1. Write an equation that states that the slope of line is .    2. Show how this slope equation (from previous part) can be rewritten in the form    3. This linear equation is said to be in point-slope form. Explain the terminology.    4. Find coordinates for three different points P that fit this equation. |
| 1. (Book1 250\*\*) (Continuation) What do the lines     and    all have in common? How do they differ from each other? |
| 1. (Book1 199\*\*) By hand (meaning only paper and pencil, or in your head), find coordinates for the points where the line   intersects the x-axis and the y-axis. These points are called the x-intercept and y-intercept, respectively. Use these points to make a quick sketch of the line. |
| 1. (Book1 202\*\*) Using a graphing tool (TI calculator, Desmos, etc), with the window set as and , graph the line . Notice that you can see both axis intercepts. Now graph using the same window settings. What happens? Why? Calculate by hand the axis intercepts and adjust your window so that they are visible. Try and hand-draw the result in the space below.   How to set axis window in Desmos: |
| 1. Absolute value review: (In the book, pages 87-90)   Page 88:   |  |  | | --- | --- | | (a) | (b) | | (c) | (d) | | (e) |  |  |  |  | | --- | --- | | (f) | (g) | | (h) |  |   Page 91:   |  |  | | --- | --- | | (1) | (5) | | (10) | (18) |  |  |  | | --- | --- | | (21) | (23) | |