**TASK B**



**Find and select the SLIDER tool and click on the drawing pad. Create TWO sliders, *m* and *b*, each with an interval from -10 to 10.** Use the drag arrow to move the sliders into position.

**RIGHT CLICK on each slider** and change the following OBJECT PROPERTIES.

1. Use the SHOW LABEL menu to select NAME only.
2. Use the SLIDER tab to FIX the horizontal slider position.
3. Use the tabs to choose your favourite colour and style.
4. Make sure your line thickness is *at least 3* before closing the PROPERTIES box.

**Enter the equation y = m\*x + b in the INPUT line and press ENTER.**

**RIGHT CLICK on the line** and change the following OBJECT PROPERTIES.

A) Use the SHOW LABEL menu to select VALUE only.

B) Use the tabs to choose your favourite colour and style.

C) Close the PROPERTIES box. Use the drag arrow to move the equation into a more suitable position.

**Use the DRAG tool to move the *m-slider* over the full range of values from -10 to 10*.***



Discuss the slope of the line. Comment on that happens when m <0, m = 0 and as m → 10.

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| *Place your answer here…* |

**Use the DRAG tool to move the *b-slider* over the full range of values from -10 to 10*.***



What is happening to the line? Which parameter is varying?

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| *Place your answer here…* |

**Show the SLOPE and Y-INTERCEPT for this line as you did in Task A.**



**Find and select the POINT tool and place a new point on the origin (0, 0)**

**Find and select the SEGMENT BETWEEN TWO POINTS tool to join your two new points A and B.**



**RIGHT CLICK on the segment.** In the OBJECT PROPERTIES SHOW LABEL menu, select VALUE only.

What can you conclude about the variables *m* and *b* in the equation y = *m*x + *b*

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| *Place your answer here…* |

**Use the DRAG tool to move your sliders to form of the equation from Task A: y = 3x + 1**

**RIGHT CLICK equation ‘a’ in the algebra window and change the form of the equation.**

Write it in LINE 2 below. Complete LINE 3 by writing the equation in general form *a*x + *b*y + *c* = 0.

Then complete the same task for another three equations of your own choice.

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| *Place your answers here…* | | | |
| *LINE 1 y = 3x + 1*  *LINE 2*  *LINE 3* | *LINE 1*  *LINE 2*  *LINE 3* | *LINE 1*  *LINE 2*  *LINE 3* | *LINE 1*  *LINE 2*  *LINE 3* |

**4. Now select FILE/EXPORT IMAGE to clipboard** and PASTE it in the space below.

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| *Investigating straight lines: TASK B* |