**STK 353**

**Practical 1: Basics**

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Answer Sheet

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| 1 | A grey box shows up under the ‘Plot’ tab, where I assumed the plotted graph was supposed to appear. |
| 2 | The dataset *mpg* consists of 234 rows and 11 columns. |
| 3 | The variable named *drv* describes to which wheels the vehicle’s power output is sent. |
| 4 | Plot: *hwy* vs*. cyl* |
| 5 | Plot: *drv* vs. *class*  The data doesn’t seem to tell us much and is chaotically scattered. This is expected however, since any *drv* can be found in any *class*, i.e. there is no reason to expect that the variables should correlate. |
| 6 | Categorical variables: *manufacturer, model, year, trans, drv, fl, class*.  Continuous variables: *displ, cyl, cty, hwy.* |
| 7 | Plot: *displ* vs. *cty* (to color)  The color aesthetic maps the magnitude of *cty* to a lighter shade of blue the greater the value.  Plot: *displ* vs. *cty* (to size)  The size aesthetic maps the magnitude of *cty* to a larger black dot the greater the value.  Plot: *displ* vs. *cty* (to shape)  This graph is unattainable since continuous variables cannot be mapped to unordered descriptors e.g. shapes. |
| 8 | Plot: *displ* vs. *cty* (to color and shape)  As shown above, multiple aesthetics can be implemented in our graphical representation of the data. |
| 9 | The stroke aesthetic magnifies the data points visually. The function *?geom\_point* also tells us that the stroke aesthetic defines the width of the border of shapes. |
| 10 | To draw a line chart, use *geom\_line()*. For a boxplot, use *geom\_boxplot()*. For a histogram, use *geom\_histogram()*. For an area chart, use *geom\_area(),* |

**Total Marks (out of 10):**