

# Forces

## Finding Gravity experimentally

# MYP Physics 1.2

- Use the Newton meters provided to measure a variety of the different masses provided
- Record measurements in the table below

Mass (kg)	Force (kg.m/s <sup>2</sup> )

- Collect data from other groups and record this class data in a suitable table
- Plot a scatter graph of mass (X) against force (y). Make sure you plot the mass in kg
- Add range bars to the graph
- Add best line of fit
- Find the slope of the line (rise over run), what is the unit?
- What does this value represent?
- What is the **true value** for this relationship?
- What do we normally call this value?
- How accurate was your result? (How close was your value to the true value?)
- Calculate % error =  $\frac{\text{True value} - \text{measured value}}{\text{True value}} \times 100$
- How reliable was your data (look at size of range bars, small size suggests good reliability)
- Where could errors have occurred and how could these be avoided?