

PHET Gravity Force Lab

Question 1: How does gravitational force change as one or more of the masses changes?

Hypothesis 1:

Question 2: How does gravitational force change as the distance between the masses change?

Hypothesis:

Procedures:

- For question 1, set one mass from 5-20 kg, 5m apart from the second mass. <u>Vary the second</u> <u>mass only.</u> Take at least 10 data points.
- For question 2, set both masses to 20 kg, 5m apart. <u>Vary the distance</u>. Take as many data points as the screen will allow.

Data: Complete tables, make 2 graphs (Mass vs Force, Distance vs Force)

Analysis and Conclusions:

• Answer both questions by stating whether the relationships are one or more of the following: INEAR, QUADRATIC, DIRECTLY PROPORTIONAL, and/or INVERSELY PROPORTIONAL.

TABLE 1: MASS VS FORCE

Mass (kg)	Force (N)

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TABLE 2: Distance VS FORCE

Distance (m)	Force (N)

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