Rubber Band Lab Questions

1. Rank the following situations from greatest to least based on the distance the box will travel. In case A, the box has mass m and 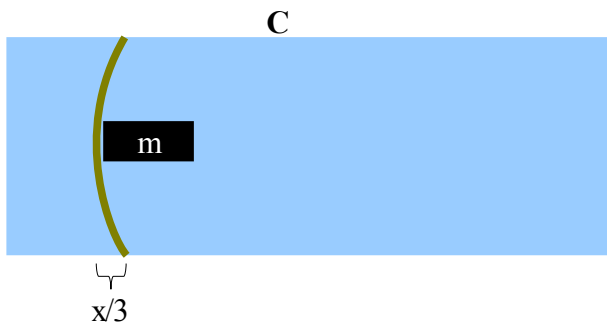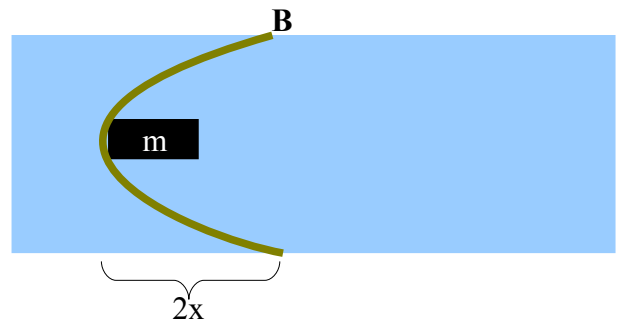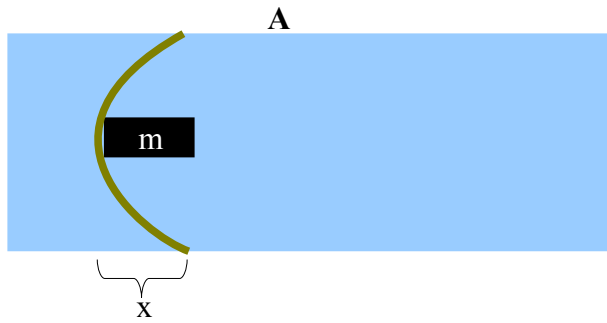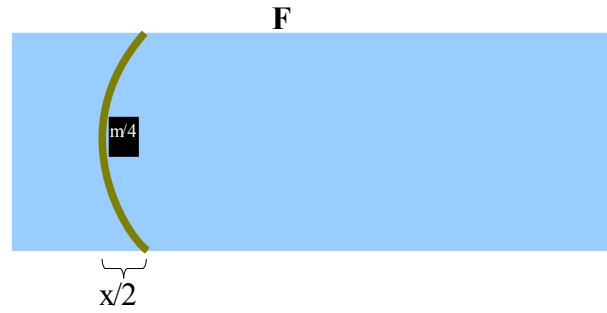the rubber band is pulled back a distance x. In case B, the box still has mass m, but the rubber band is pulled back twice as far (2x). In case D, the rubber band is pulled back the same distance, x as in case A, but the mass of the box is half as much, m/2.

A

m

x

B

m

2x

C

m

x/3

D

m/2

x

E

3m

x

F

m/3

x
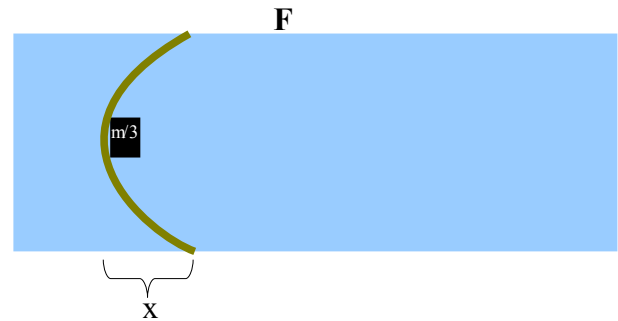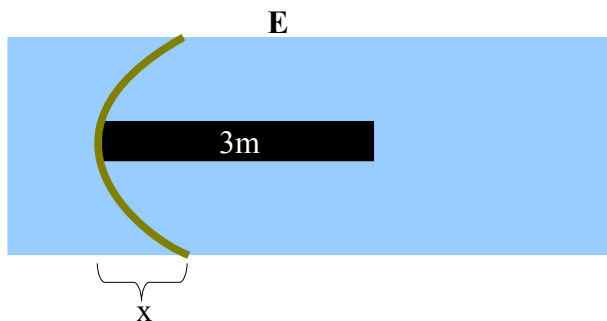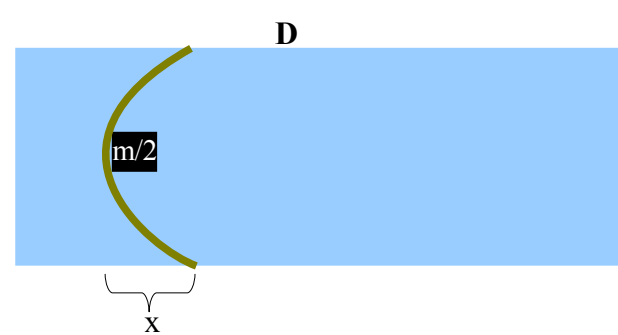
2. Rank the following case among those from problem 1.

F

m/4

x/2

3. Rank the following case among those from problem 1.

G

m/4

x/3
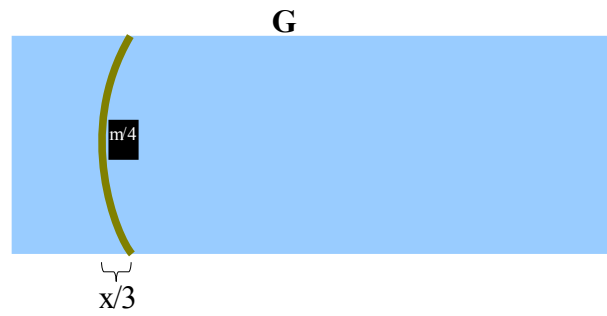
4. Combined proportionality graph.
(a) In Fathom, add a combined row to your data table according to the class discussion. In the space below, show one sample calculation of the combined quantity including units. Fathom already tells you the answer. The point here is to show your work in detail so I know you understand the calculation.

(b) In Fathom, graph distance vs. combined, and find an equation for the line.

5. Lab Practicum.