

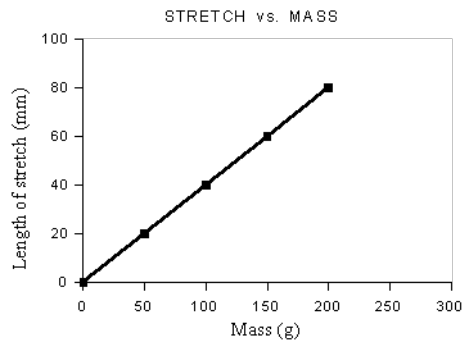
# Springs

**This task is about identifying patterns in data.**

Tracey had been investigating how much a spring stretched when various masses were attached to it. Here are the results of her investigation:

Mass (g)	Length of stretch (mm)
50	20
100	40
150	60
200	80

She graphed her results like this:



a) Use the graph to work out the length of stretch for

i) 60 g  mm

ii) 160 g  mm

b) What is the mass if the stretch is 45 mm?  g

c) There is a simple relationship between mass and stretch. What is the relationship?

stretch =  $0.4 \times$  mass

mass =  $0.4 \times$  stretch

stretch =  $20 +$  mass

mass =  $20 +$  stretch