## M3.3 – Understand that y = mx + c represents a linear relationship

### Quiz

**1.** Sketch a graph to show how cardiac output changes as heart rate increases if stroke volume does not change.

Note: if you have covered topic **3.1.2 Transport in animals** you should already know the equation that relates cardiac output to stroke volume and heart rate. In an exam you could be tested, as part of a question like this, on whether you can remember the equation but here is a reminder:

**2.** Data from an experiment show that the mean height attained by seedling shoots in the first 48 hours after germination is directly proportional to the concentration of auxin applied to the germinating seed. Seedlings without any auxin treatment grew to a mean height of 12 mm. Seedlings exposed to the maximum concentration of auxin grew to a mean height of 31 mm.

Sketch a graph to show the relationship between mean seedling height and auxin concentration.

### Produced in collaboration with the University of East Anglia