

**Exercise 6.1** Answer concisely. [£]

1. What is the difference between an ordered pair and a set?
2. What is the difference between an equation and an identity?
3. What is the difference between a function and its graph?

**Exercise 6.3** Consider the following question:

*I drive ten miles at 30 miles an hour, and then another ten miles at 50 miles an hour. It seems to me my average speed over the journey should be 40 miles an hour, but it doesn't work out that way. Why not?*

Write an explanation for the general public, clarifying why such a confusion may arise. You may perform some basic arithmetic, but do not use symbols as most people find them difficult to understand. [£]

### Exercise 6.4 Consider the following question:

*I tossed a coin four times, and got heads four times. It seems to me that if I toss it again I am much more likely to get tails than heads, but it doesn't work out that way. Why not?*

Write an explanation for the general public, clarifying why such a confusion may arise. You may use symbols such as  $H$  and  $T$  for heads-tails outcomes, but avoid using other symbols. [✎]