



Sometimes a hypothesis states the direction in which the results are expected to go, for example 'studying *improves* exam marks', 'women are *better* drivers than men'. With a correlational study, a directional hypothesis states that there is a *positive* (or *negative*) correlation between two variables.

When a hypothesis states the direction of the results, it is referred to as a **directional (one-tailed) hypothesis**; this is because it states that the results go in *one* direction. If a hypothesis does not state a direction but simply says that one factor affects another, or that there is an association or correlation between two variables then it is called a **non-directional (two-tailed) hypothesis**.

Distinguishing between directional and non-directional hypotheses is really very straightforward but be careful! Sometimes, because we ourselves expect results to go in a certain direction, we assume a hypothesis is directional when in fact it is non-directional. For example, everyone knows the more you revise, the better you do in exams but a hypothesis may say 'There is a difference in the exam results between those who revise a lot and those who do not revise' and this is, of course, a non-directional hypothesis.



Your task: Decide whether the following general hypotheses are directional or non-directional.

1. Alcohol affects reaction time.
2. Men who have beards are perceived as older than clean-shaven men.
3. The quality of beer affects bar takings.
4. Boys are more aggressive than girls.
5. Watching tropical fish helps you relax.
6. The faster you type, the more mistakes you make.
7. Individuals are more likely to conform when in groups of five than when in pairs.
8. Anxiety affects the level of adrenaline in the blood.
9. People's running speed will be affected by whether or not they have an audience.
10. Wearing make-up has an effect on how attractive a person is rated to be.

Extension task

What is the main factor which determines whether a researcher uses a directional or non-directional hypothesis?