

Name: _____

Exam Style Questions

Data Handling Cycle



Corbettmaths

Ensure you have: Pencil, pen, ruler, protractor, pair of compasses and eraser

You may use tracing paper if needed

Guidance

1. Read each question carefully before you begin answering it.
2. Don't spend too long on one question.
3. Attempt every question.
4. Check your answers seem right.
5. Always show your workings

Revision for this topic

Secondary

Video 89



1. James is a driving instructor.

He wants to investigate the following hypothesis.

"Females are more likely than males to pass their driving test in their first attempt."

Use the data handling cycle to describe how James could carry out this investigation and test his hypothesis.

James should take a sample of people
who have passed their driving test.

In his survey, he should ensure he
collects information about gender and
how many attempts it took to pass the
driving test.

James should calculate the percentage
of men who passed in their first
attempt and also the percentage of
women who passed in their first
attempt.

If a greater percentage of women
passed in their first attempt, than
men, this would confirm his hypothesis.

If not, it would deny his hypothesis.

(4)

2. Sarah is a scientist.

She wants to investigate the following hypothesis.

"Non-smokers have higher levels of fitness than smokers."

Use the data handling cycle to describe how Sarah could carry out this investigation and test her hypothesis.

Sarah should take a sample of people who are smokers/non-smokers.

She should get the people to take part in a fitness test.

Sarah should calculate the average of the fitness test results for the smokers and the non-smokers.

She could also draw a box plot for the smokers and a box plot for non-smokers.

If the average fitness test score is better for the non-smokers (or the box plot for the non-smokers show better fitness levels) this would confirm her hypothesis. If not, it would deny her hypothesis.

(4)

3. Jenny is a piano tutor.

Half of her students have pianos at home.

She wants to investigate the following hypothesis.

"Students who have pianos at home get higher scores in piano exams."

Use the data handling cycle to describe how Jenny could carry out this investigation and test her hypothesis.

Jenny should get her students to sit a piano exam and she should record their results.
Jenny should then work out the average (mean) score for the students with a piano at home and also for the students without one.
She could also draw a box plot for the students with a piano and a box plot for those without.
If the average test score is better for the students with pianos (or the box plot for the students with pianos show better fitness levels) this would confirm her hypothesis. If not, it would deny her hypothesis.

(4)