

Working it out – Use data to assess likelihood of an outcome

This example looks at a task that requires the learner to calculate a probability and express it in an appropriate form. We explore where we would apply marks.

Task:

Your company is concerned about the environment. They want to know if fewer cars could be driven to work.

Survey data

You do a survey of cars and people coming to work on single day. Below are the numbers of people in each car that arrived at work.

2	1	1	3	1
2	2	1	1	4
1	1	2	3	2

There were 5 other people that came to work but did not travel by car.

What is the likelihood that a car arriving at work has only 1 person in it?

Marks available: 1

Mark scheme used by examiners:

The table below shows how the examiners will apply the mark for the task.

CAO = Correct Answer Only

FT = Follow Through

Activity	Marks	Comments
7/15 CAO	1	Allow equivalent, for example, 7 out of 15, 0.47, 47%, almost half

Learner responses

Learner A:


7 out of 15  7/15

1 mark awarded

1 mark awarded for correct answer

Learner responses

Learner B:


Likely as seven out of 15 cars came with a single driver 

1 mark awarded

1 mark awarded for correct answer

Learner responses

Learner C:

Extremely likely 

0 marks awarded

0 marks awarded as incorrect and no supporting evidence is supplied

Learner responses

Learner D:

7 in 20 

0 marks awarded

0 marks awarded as 7 out of 15 is required (learner may have included 5 people walking)

Learner responses

Learner E:

It is over half likely that a car arriving at work has 1 person in it **x**

0 marks awarded

0 marks awarded as “over half” is incorrect and no supporting evidence is supplied

Overall examiner comment:

This task hasn't requested final display in a particular form, so displaying as a fraction, decimal or percentage would all be acceptable. However, probability tasks may request final answers in a specific form and task instructions should be carefully checked.

Some learners may benefit from support increasing familiarity of vocabulary, for example, likelihood, as they may have only experienced the term probability. Additionally, it's often helpful for learners to be familiar with terms such as lowest form or simplest form, or displaying as a decimal.