

5 A farmer has a plough that is an automated system. The plough is used to dig the ground in a field to prepare it for planting seeds.

The plough uses sensors and a microprocessor to maintain a straight line when digging the ground.

(a) State what is meant by an automated system.

.....
..... [1]

(b) Describe the role of the microprocessor in this process.

.....
.....
.....
.....
.....
..... [3]

(c) Give **two** benefits to the farmer of using an automated system for this purpose.

1

2

..... [2]

(d) The plough uses artificial intelligence (AI) to navigate its way around the field.

Explain how the plough makes use of AI for this purpose.

.....
.....
.....
.....
.....
.....
..... [4]