



Cambridge Assessment International Education
Cambridge International General Certificate of Secondary Education

GEOGRAPHY

0460/41

Paper 4 Alternative to Coursework

May/June 2019

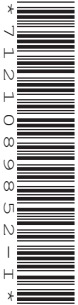
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1 hour 30 minutes

READ THESE INSTRUCTIONS FIRST

The Insert contains Figs. 1.1 and 1.4 and Tables 1.2 and 1.3 for Question 1, and Tables 2.1, 2.2 and 2.3 and Fig. 2.2 for Question 2.

The Insert is **not** required by the Examiner.



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This document consists of **7** printed pages and **1** blank page.

Fig. 1.1 for Question 1

Land use on the farm

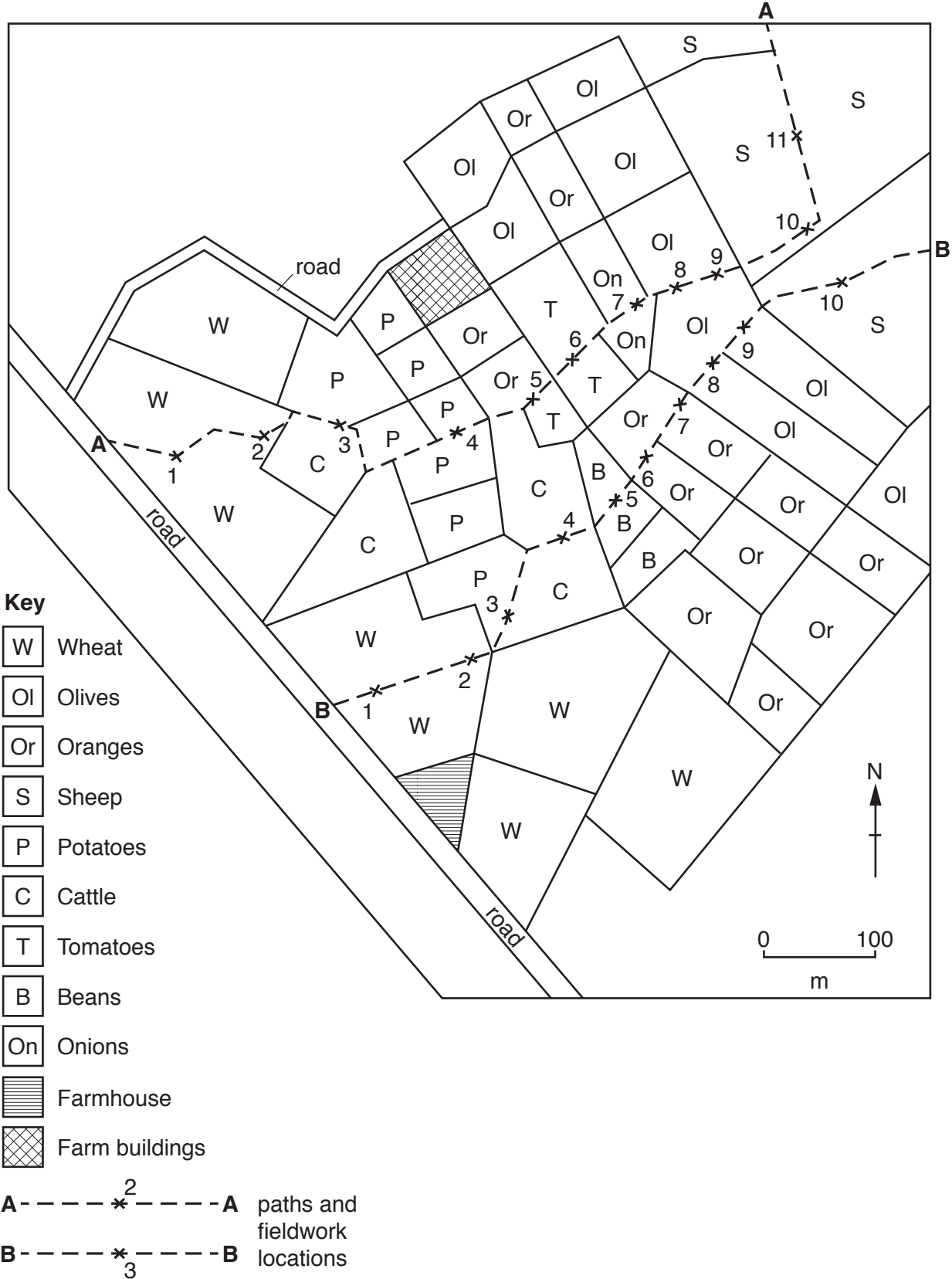


Fig. 1.4 for Question 1

Cell (mobile) phone screen

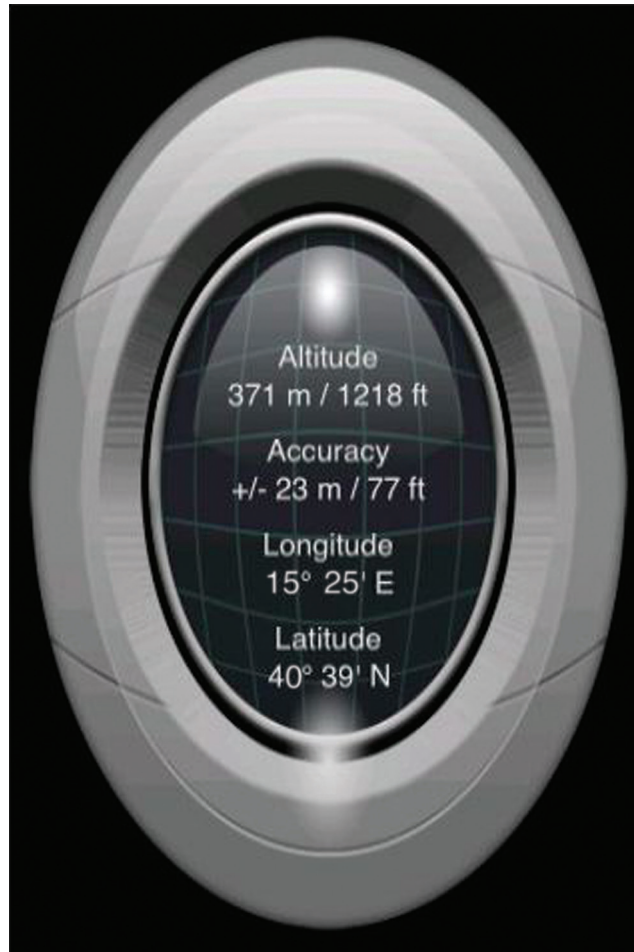


Table 1.2 for Question 1**Results of fieldwork****Path A**

Fieldwork location	Land use in the field	Height of land (m)	Angle of slope (degrees)
1	Wheat	57	2
2	Wheat	59	2
3	Cattle	66	3
4	Potatoes	71	2
5	Oranges	75	4
6	Tomatoes	78	5
7	Onions	89	7
8	Olives	104	9
9	Olives	126	16
10	Sheep	153	25
11	Sheep	176	23

Path B

Fieldwork location	Land use in the field	Height of land (m)	Angle of slope (degrees)
1	Wheat	56	3
2	Wheat	63	4
3	Potatoes	66	6
4	Cattle	70	4
5	Beans	74	7
6	Oranges	75	8
7	Oranges	77	8
8	Olives	96	12
9	Olives	119	13
10	Sheep	142	19

Table 1.3 for Question 1

Field size and labour requirements

Land use in the field	Average field size (hectares)	Labour needed (hours per hectare per year)
Sheep	8.3	4
Wheat	7.0	7
Cattle	6.2	6
Olives	3.9	9
Beans	3.3	13
Onions	3.1	17
Tomatoes	2.9	19
Oranges	2.5	13
Potatoes	2.2	16

Table 2.1 for Question 2

Results at site 5

Distance across channel (m)	0.5	1	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6
Depth of river (m)	0.15	0.25	0.27	0.21	0.16	0.18	0.16	0.13	0.11	0.07	0.05	0.02

Table 2.2 for Question 2

Wetted perimeter

Site	Distance downstream from source (km)	Group A wetted perimeter calculation (m)	Group B wetted perimeter measurement (m)
1	0.5	1.75	1.8
2	2.1	3.25	3.6
3	7.4	4.0	3.5
4	11.3	6.3	6.9
5	15	6.9	6.6

Table 2.3 for Question 2

Average velocity

Site	Average velocity (m/sec)
1	0.29
2	0.58
3	0.46
4	0.39
5	0.67

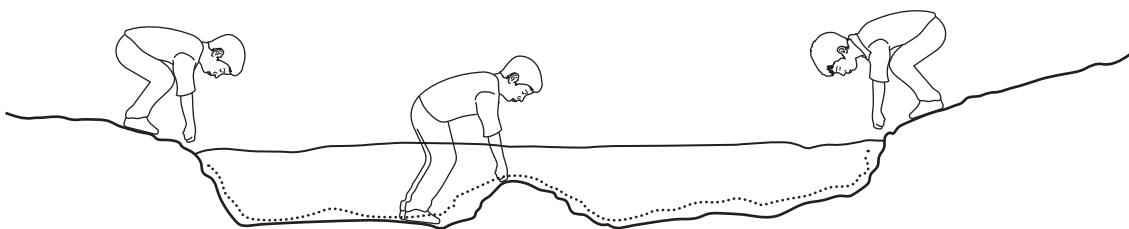
Fig. 2.2 for Question 2

Measuring the wetted perimeter

Wetted perimeter can be measured using a rope or tape measure, which should be stretched across the river bed from one bank to the other.



Measuring the wetted perimeter



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