



Cambridge IGCSE™

GEOGRAPHY

0460/43

Paper 4 Alternative to Coursework

May/June 2021

INSERT

1 hour 30 minutes

INFORMATION

- This insert contains additional resources referred to in the questions.
- You may annotate this insert and use the blank spaces for planning. **Do not write your answers** on the insert.



This document has **12** pages. Any blank pages are indicated.

Fig. 1.1 for Question 1

Measuring river velocity

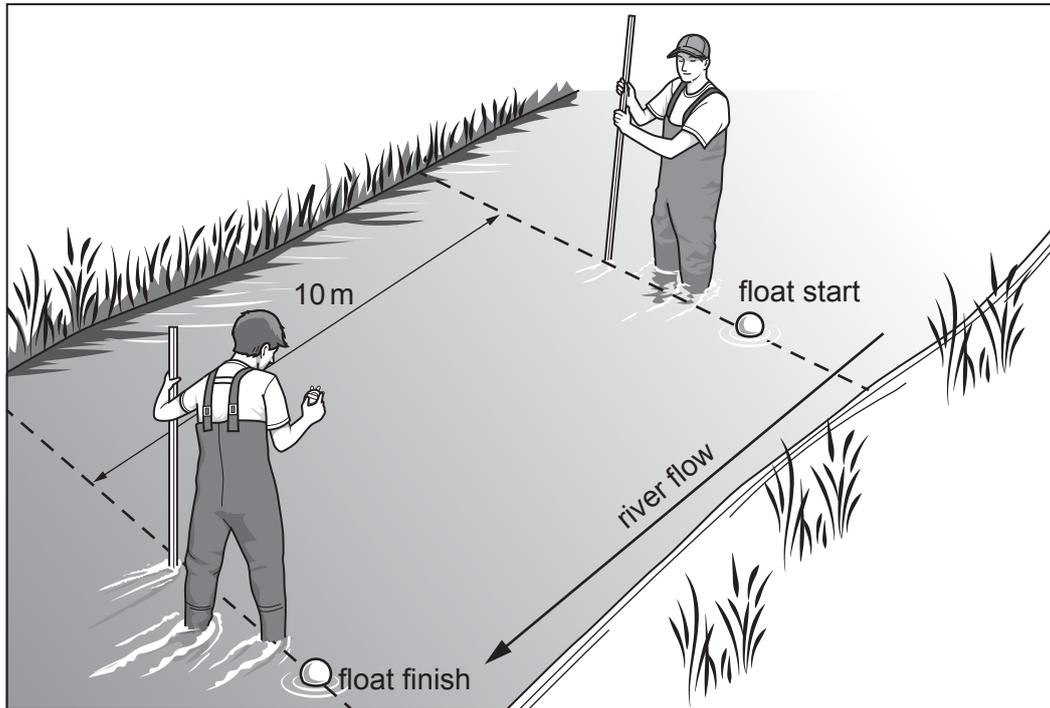


Table 1.1 for Question 1

Results of velocity measurements

		speed of flow (m per second)			
site		left side of channel	centre of channel	right side of channel	average
upstream	1	0.65	0.73	0.90	0.76
	2	0.82	0.37	0.70	0.63
downstream	3	0.32	0.62	0.41	0.45

upstream
 ↑↓
 downstream

Fig. 1.2 for Question 1

Measuring river width and depth



Table 1.3 for Question 1

Width and depth measurements

	site	width (m)	average depth (m)
upstream	1	0.93	0.17
↕	2	2.00	0.23
downstream	3	3.45	0.31

Table 1.5 for Question 1

Gradient measurements

	angle measurement (°)			
site	measurement 1	measurement 2	measurement 3	average
1	18	16	15	16.3
2	9	13	10	10.7
3	7	4	8	6.3

Fig. 2.1 for Question 2

The two farms

Bryn Du farm in Wales



Home Park farm in eastern England



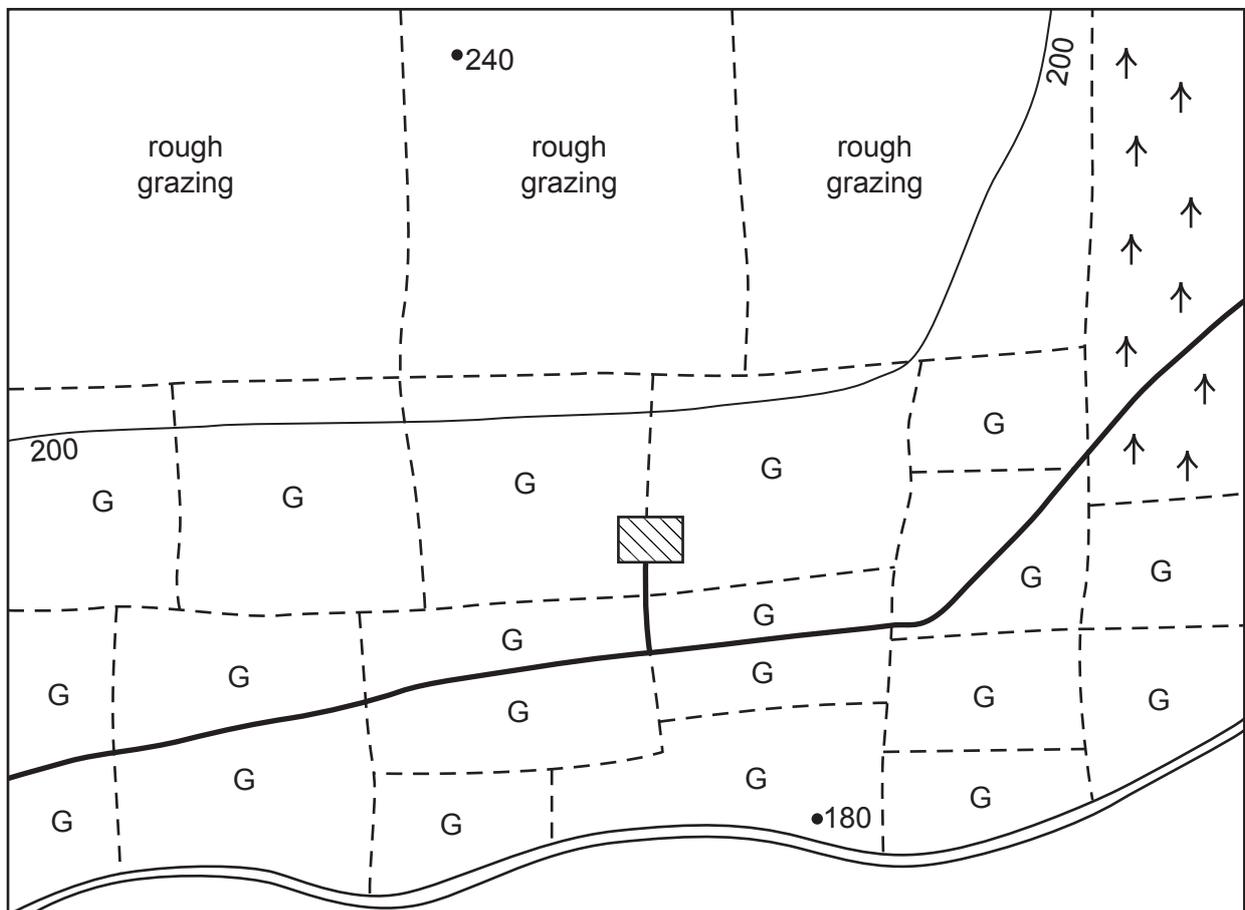
Table 2.1 for Question 2

Climate of the local areas

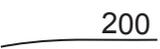
	average temperature °C		annual rainfall (mm)
	January	July	
Bryn Du farm	4	16	1350
Home Park farm	5	19	550

Fig. 2.2 for Question 2

Students' sketch map of part of Bryn Du farm



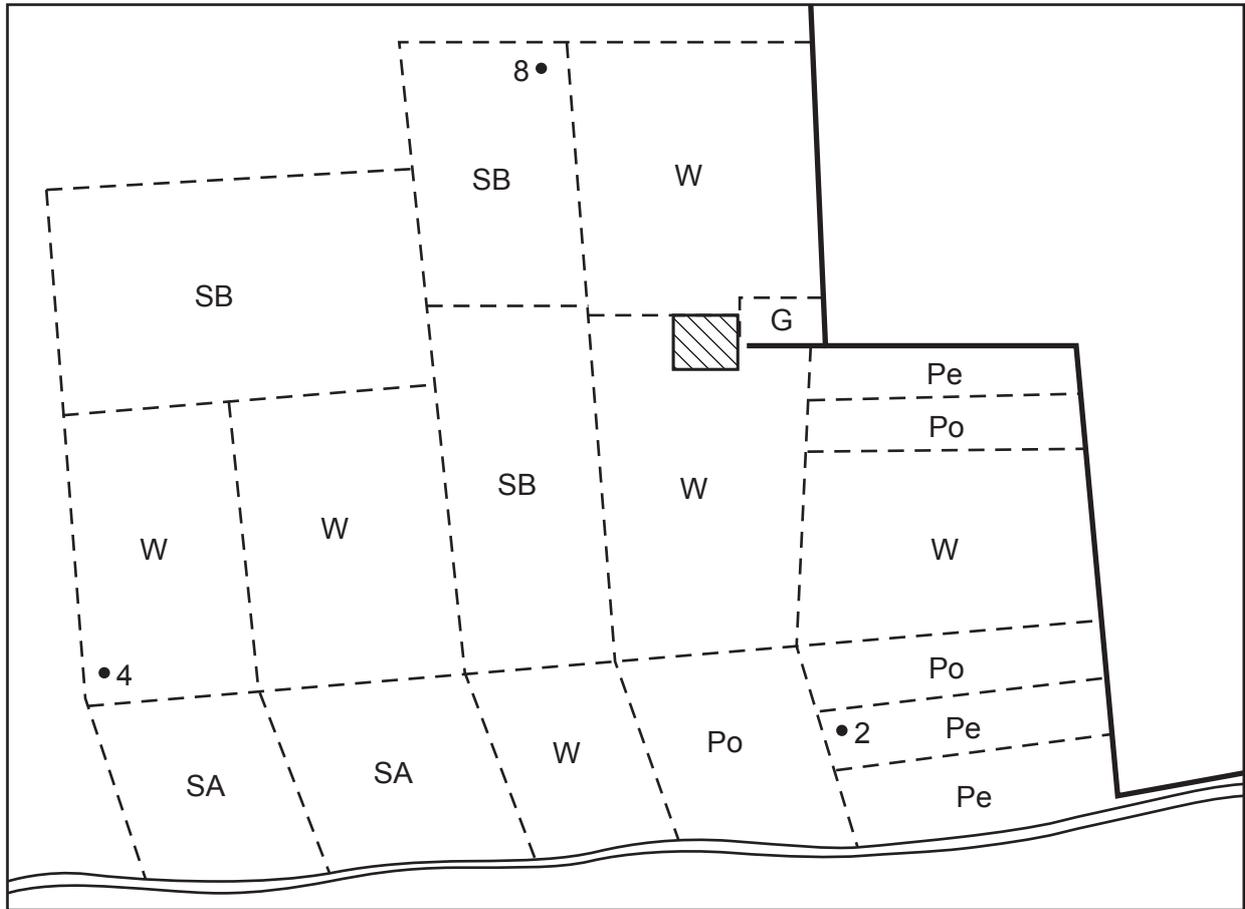
Key

	farmhouse and farm buildings		200 contour line (metres)
	woodland		180 spot height in metres
	grassland		road
	field boundary		river

not to scale

Fig. 2.3 for Question 2

Students' sketch map of Home Park farm



not to scale

Key

farmhouse and farm buildings

crops

SB sugar beet

W wheat

Pe peas

Po potatoes

• 4

spot height in metres



road



drainage channel

G

grassland

SA

set-aside

Table 2.3 for Question 2

Land use on both farms

land use	Bryn Du farm		Home Park farm	
	hectares (ha)	percentage (%)	hectares (ha)	percentage (%)
crops	0	0	253	89
grassland	83	65	4	1
rough grazing	35	28	0	0
set-aside	0	0	28	10
woodland	9	7	0	0
total	127	100	285	100

Crops grown on Home Park farm include wheat, potatoes, sugar beet and peas.

Grassland on Bryn Du farm is used for grazing and silage (to feed the cattle and sheep).

Set-aside is land on which no crops are grown to reduce over-production.

Table 2.4 for Question 2

Cost of inputs in both farms

input	Bryn Du farm	Home Park farm
	cost (£)	cost (£)
fertiliser	1700	18 500
pesticides	1000	22 000
food for animals	12 500	0
fuel	6600	4600
labour (workers)	20 000	26 000
machinery	68 000	142 000
total	109 800	213 100

Table 2.5 for Question 2

Outputs from the two farms

output	Bryn Du farm
number of lambs	1100
number of young cows	40
number of bales of hay	300
number of bales of silage	700
wool	3400 kg

output	Home Park farm
wheat	1100 tonnes
sugar beet	2300 tonnes
potatoes	1050 tonnes
peas	200 tonnes

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