

## **MARK SCHEME for the October/November 2013 series**

### **0460 GEOGRAPHY**

**0460/43**

Paper 4 (Alternative to Coursework), maximum raw mark 60

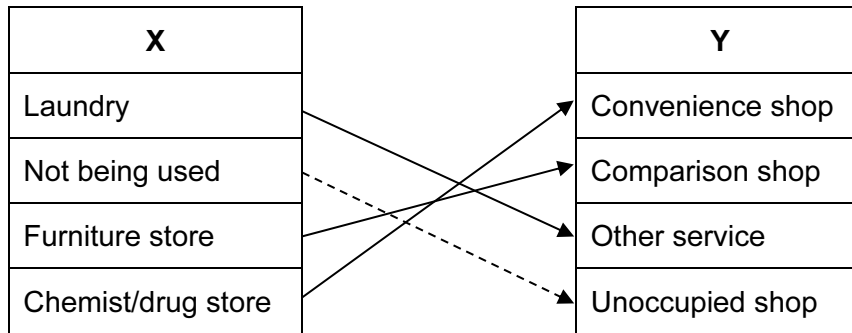
This mark scheme is published as an aid to teachers and candidates, to indicate the requirements of the examination. It shows the basis on which Examiners were instructed to award marks. It does not indicate the details of the discussions that took place at an Examiners' meeting before marking began, which would have considered the acceptability of alternative answers.

Mark schemes should be read in conjunction with the question paper and the Principal Examiner Report for Teachers.

Cambridge will not enter into discussions about these mark schemes.

Cambridge is publishing the mark schemes for the October/November 2013 series for most IGCSE, GCE Advanced Level and Advanced Subsidiary Level components and some Ordinary Level components.

1 (a) (i)



All 3 correct = 2 marks, 1 or 2 correct = 1 mark [2]

- (ii) Shop owners losing money/bankrupt/went out of business  
 Competition from other shopping centres/too many shops selling same goods  
 High rents  
 Decrease in number of customers/not enough customers/lack of demand  
 New shopping centre/still looking for new business  
 Undergoing renovation 2 @ 1 [2]

- (iii) People travel further to buy comparison goods than convenience (low order) goods  
 Comparison goods usually cost more than convenience goods  
 If more than 2 answers deduct 1 mark for each incorrect answer 2 @ 1 [2]

- (b) (i) Work in pairs, not alone  
 Don't block pavement/entrance to shops  
 Be polite to interviewees  
 Accept that people won't want to answer questions/too busy/in a hurry  
 Ask a range of people/get a representative sample of age or gender/distribute at random  
 Choose a time when there are plenty of people shopping  
 Ask people leaving different shops 2 @ 1 [2]

- (ii) Hypothesis is **true/partially true** people buy different types of goods – 1 mark reserve  
 CBD contains more comparison shops/local shopping centre contains more convenience shops. Allow 'only' with figures  
 People go to CBD for comparison goods/to local shopping centre for convenience goods OR individual purchases. Allow 'only' with figures  
 People buy some goods in both centres e.g. food/convenience goods  
 Credit use of paired data which compares the types of shops (Table 1) or goods purchased (Table 2) to 2 marks max  
 e.g. convenience goods – 15 bought in CBD, 27 bought in local shops  
 47 comparison shops in CBD & 3 in local shopping centre  
 Hypothesis conclusion is incorrect/false no credit [4]

- (c) (i) Completion of histogram – less than 10 minutes (21 – Larco Ave and 25 – Enrique Palacios).  
 Ignore shading 2 @ 1 [2]

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- (ii) Completion of pie chart – between 2 and 6 days = 50%, between 1 and 4 weeks = 22%  
 1 mark for correct position of line, 1 mark for shading  
 No mark for line if plotted wrong way round, but credit shading if correct [2]

- (iii) Overall hypothesis is **not true/partially true** – 1 mark reserve  
 'Longer' hypothesis is partially true/not true  
 'Frequency' hypothesis is not true  
 If answer as two separate sections consider each hypothesis separately and credit 1 max for hypothesis. If both hypothesis conclusions agree with mark scheme go to 4 marks max. If one conclusion agrees with mark scheme but the other conclusion does not agree with mark scheme go to 2 marks max.

Most people do not take longer to get to Larco Ave/CBD/little difference

People go more frequently to Enrique Palacios/local shopping centre/  
 people go less frequently to CBD

Credit use of paired % data which compares the two centres to  
 1 mark maximum

Hypothesis conclusion is true/correct no credit [4]

- (d) (i) More/larger percentage walked to Enrique Palacios/local shopping  
 Centre OR two correct statistics (28 and 8)  
 More/larger percentage went by car to Larco Avenue/CBD OR two correct statistics  
 (22 and 36)

More go by car than walk to CBD OR two stats (36 and 8)  
 More walk than go by car to local shops (28 and 22) [2]

- (ii) Would not change the conclusion/conclusion would still be valid/hypothesis would still be  
 false  
 Helps to provide an explanation e.g. such as quicker to travel by car than walk/takes  
 longer to walk than go by car/method of transport will affect time taken [2]

- (iii) Distance to travel/how long it will take to travel to shopping centre  
 Likely duration of visit/how long shoppers stay  
 What/how much they are buying/what they are buying/type of shop they visit  
 Availability of regular bus service/public transport/taxi  
 Availability/cost of car parking  
 Weather conditions/weather forecast/more likely to travel by car if raining  
 Level of car ownership/do shoppers own a car/can shoppers afford car/car sharing/can  
 shopper afford petrol or bus fare  
 Traffic congestion/amount of traffic  
 How much time they have  
 Risk of crime/safer to drive/no pavements to walk on 3 @ 1 [3]

- (e) Choropleth map/pictogram  
 Divide city/draw map to show different districts/show where groups of people live  
 Devise categories for choropleth shading/symbols  
 Shade different districts according to key  
 Include a key of categories [3]

[Total: 30]

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- 2 (a) Keep away from base of cliff/overhang  
 Don't stand on edge of cliff  
 Check tide times before setting off/watch for incoming tide/do fieldwork at low tide  
 Avoid slippery rocks/sharp rocks  
 Measure waves from safe position/don't go into sea  
 Take mobile/cell phone/whistle  
 Work in groups/pairs/not alone  
 Tell teacher/adult where you are going  
 Suitable clothes/protective clothes/footwear/sunblock 3 @ 1 [3]
- (b) (i) Place marker poles along rope/transect line  
 Put poles at each break of slope  
 Ensure they are vertical  
 Same length of pole above surface at each point  
 Use a clinometer to measure angle/read angle  
 Hold clinometer next to top/at agreed height on marker pole/eye level  
 Sight other marker pole at top/agreed height  
 Repeat along transect/different places up beach  
 Measure distance between marker poles [4]
- (ii) Cala Bassa (sandy) is wider or longer or larger/Cala Blanca (pebbles) is narrower or shorter or smaller  
 Cala Bassa is 35 m and Cala Blanca is 17 m [1]
- (iii) Hypothesis is **true**/pebble beach (Cala Blanca) has steeper profile  
 1 mark reserve
- Cala Blanca is narrower beach than Cala Bassa but both go to same height (elevation)/  
 Blanca goes to greater height (elevation)
- Cala Blanca increases 5–5.5 m in 16.9–17 m and Cala Bassa increases 5 m in 34.5–35 m
- 1 mark for paired gradient measurements (Blanca 1 in 3, Bassa 1 in 7)
- 1 mark for paired angle measurements, these could be at individual points or average for the beach
- Hypothesis conclusion is false no credit [4]
- (c) (i) Put quadrat on ground/beach/throw quadrat  
 Count the number of squares with different types of beach material  
 Do more than one measurement and calculate average  
 Do task in each section of beach profile [3]
- (ii) Classification as sand, shingle, pebbles or cobble is subjective/may be classified differently at different sites  
 Some types of material look similar  
 Estimating the percentages may lead to inaccuracy/inconsistency  
 Measuring individual beach material would take a lot of time  
 May be boulder/bare rock/seaweed/driftwood/litter in quadrat [1]

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- (iii) Completion of divided bar graph: shingle – 48, pebble – 40, cobble – 12  
 2 marks for dividing lines  
 1 mark for shading – must be in correct order [3]
- (iv) Hypothesis is **true** for **Cala Blanca** beach/larger beach material away from sea – 1 mark reserve  
 1 mark for data which refers to pebbles or cobbles or compares two profiles – need two percentages and locations  
 e.g. cobble increases from A – B 0% to H – I 20% OR across whole beach  
 Hypothesis conclusion is false/partially true no credit  
 Hypothesis is **not true** for **Cala Bassa** beach – 1 mark reserve  
 1 mark for data which refers to sand or shingle or compares two profiles – need percentages and locations  
 e.g. over 80% sand in all sections  
 only sand/100% sand in A–B and E–F  
 Hypothesis conclusion is true/partially true no credit 2 + 2 [4]
- (v) Powerful swash throws all material up the beach/material thrown up beach during storms  
 Less powerful backwash can only carry the smaller material down the beach  
 Material from cliff at back of beach is larger [2]
- (d) (i) Possible hypothesis:  
 Lighter beach material is moved more quickly by longshore drift  
 Groynes on the beach interrupt the movement of longshore drift  
 Rate of longshore drift is affected by wave height/wave frequency  
 More longshore drift on a sandy beach/Cala Bassa than a pebble beach/Cala Blanca or vice versa  
 Where more longshore drift takes place there is smaller material  
 Longshore drift occurs in direction of prevailing wind  
 Must include 'longshore drift'  
 Can be evidence that longshore drift has taken place [1]
- (ii) Description must link to chosen hypothesis. If chosen hypothesis is not credited in (b)(i) go to 2 marks max if linked to longshore drift.  
 Possible method first hypothesis:  
 Paint 50 pebbles of varying sizes  
 Group them in the wave swash/backwash zone  
 Leave them for period of time  
 Find the pebbles and measure distance from starting point  
 Measure long axis of pebble  
 Credit other ways to measure longshore drift, if appropriate. [4]
- [Total: 30]