National Qualifications 2024

2024 Geography
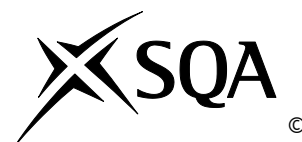
Advanced Higher

Question Paper Finalised Marking Instructions

General marking principles for Advanced Higher Geography

Always use these general principles. Use them in conjunction with the detailed marking instructions, which identify the key features required in candidate responses.

(a) Always use positive marking. This means candidates accumulate marks for the demonstration of relevant skills, knowledge and understanding; marks are not deducted for errors or omissions.

(b) If a candidate response does not seem to be covered by either the principles or detailed marking instructions, and you are uncertain how to assess it, you must seek guidance from your team leader.

(c) Use the full range of marks available for each question.

(d) The detailed marking instructions are not an exhaustive list. Award marks for other relevant points.

(e) Award marks only where points relate to the question asked. Where candidates give points of knowledge without specifying the context, award marks unless it is clear that they do not refer to the context of the question.

Marking principles for each question type
There is a range of question types in this question paper. For each question type, the following provides an overview of marking principles.

Explain **questions**
Candidates gain marks for explaining or suggesting reasons for the cause or impact of something, or for referring to causal connections and relationships. Candidates must do more than describe to gain marks here.

For source-based questions, candidates should make use of these and refer to them within their answer for full marks.

Where candidates provide a purely descriptive answer, or one where development is limited, award no more than half the available marks for the question.

Analyse **questions**
Candidates gain marks for identifying parts, the relationship between them, and their relationships with the whole; and for drawing out and relating implications.

Award an analysis mark where candidates use their knowledge and understanding or a source to identify relevant components (for example of an idea, theory, argument) and clearly show at least one of the following:
- links between different components
- links between component(s) and the whole
- links between component(s) and related concepts
- similarities and contradictions
- consistencies and inconsistencies
- different views or interpretations
- possible consequences or implications
- the relative importance of components
- understanding of underlying order or structure.

Where candidates are asked to analyse they should identify parts of a topic or issue and refer to the interrelationships between, or impacts of, various factors. For example, where a question asks candidates to analyse the different impacts of flooding on land use, they should consider the effects of the immediate area and also, where appropriate, other areas. Candidates should support analysis with evidence where relevant.

Evaluate **questions**
Candidates gain marks for making a judgement of the success, failure, or impact of something based on criteria. They should give a brief description of the technique or methodology being evaluated, before offering an evidenced conclusion.

Discuss **or** *comment on* **questions**
Candidates gain marks for exploring ideas about a project, or the impact of a change. They should consider different views on an issue or argument. They should give a range of impacts or ideas within their answer.

Draw to scale **questions**
Candidates gain marks for drawing a shape or route to the correct size using the given scale of the map.

Marking instructions for each question

Question			General marking instructions for this type of question	Max mark	Marking instructions for this question
1.	(a)		Candidates draw accurately to scale a suitable site for the lorry park. Award **1 mark** for size. Award **2 marks** for an appropriate site with access from an A or B road and suitable land/relief. Award **a maximum of 1 mark** if the area chosen is out with the grid on the tracing overlay.	**3**	The site should be 1.2 cm x 1 cm. **(1)** The site for example 806064 is next to (within 100m) the A27 **(1)** and is on gently sloping land, shown by the 15 m contour line. **(1)**
	(b)	(i)	Candidates **discuss** in detail the reasons for their choice of location. Credit should be given for responses written on both the tracing overlay and answer booklet. Candidates should explain and/or include annotations with detailed information, including good use of map reading skills. Credit should be given for effective use of the atlas. Award **1 mark** for each valid point.	**4**	**Possible answers may include:** • the site lies close to the A27 dual carriageway which will provide a fast route west to Portsmouth for the vehicles using the lorry park. **(1)** It also provides good access for construction vehicles or for deliveries to the café and shop. **(1)** The A27 connects to both Havant and Chichester for easy access for workers **(1)** • the site is on gently sloping land, as shown by the 15 m contour line, which will reduce construction costs. **(1)** As the site is not completely flat this reduces potential drainage problems **(1)** • current land use is likely to be farmland, possibly Waterloo Farm, (804066) therefore potentially easier to gain planning consent **(1)** • the site avoids any surface streams which will reduce the need for costly diversion **(1)** • the site is away from larger residential areas closer to Havant or Chichester to minimise conflict such as noise with residents **(1)** • the site is south of the South Downs National Park boundary and north of Chichester Harbour AONB to avoid conflict with conservationists **(1)** • the site lies between two large settlements of Havant and Chichester so there will be an available workforce nearby to work in the facilities such as the shop or café **(1)**

page 04

Question			General marking instructions for this type of question	Max mark	Marking instructions for this question
					• the site has Breeches Copse to the West and woodland at 806066, both approx. 100 m away, will provide some visual screening for Waterloo Farm and from the South Downs National Park boundary **(1)** • there is room to expand to the North, East and West if additional parking or other facilities are required in the future **(1)** • the A27 connects to the A3 and M3 towards London (atlas), which encourages the use of Portsmouth by HGVs rather than other congested ports in the South-East **(1)** • Portsmouth is only approx. 6 km west of the site (atlas), so it is only a short drive for lorry drivers to the port. **(1)** **Or any other valid point.**

Question			General marking instructions for this type of question	Max mark	Marking instructions for this question
		(ii)	Candidates **explain** the negative impacts that the development may have on the local area. Award **0 marks** for repeat points from b(i). Award **1 mark** for each valid point.	4	**Possible answers may include:** • the A27 may suffer from increased traffic congestion from an increased number of large slower moving vehicles. **(1)** This may affect other road users such as people living in Westbourne or Emsworth who regularly use the road to shop or work in Chichester or Portsmouth. **(1)** The A259 further South may become busier as other road users avoid the A27 **(1)** • other local facilities traditionally used by lorry drivers may lose business as they must compete with the new services at the lorry park, eg, the pub at 715057 in Havant **(1)** • increased light pollution from the lorry park at night may cause conflict with surrounding land uses such as farms, eg, Mudberry Farm, or the village of West Ashling within the national park. **(1)** It is only 400 m south of the national park boundary so conservationists may be concerned about the visual impact **(1)** • the site is only approx. 400 m from a caravan/campsite at 811065, which could be negatively affected by increased visual, noise and air pollution putting off tourists, and the business losing income **(1)** • the lorry park would be viewed as an eyesore by locals due to the rows of lorries, large buildings and the amount of concrete required, in a predominately rural landscape **(1)** • settlements along the A27 will be impacted by increased noise and air pollution from the increased traffic, eg, Hambrook **(1)** • the local landowner may be forced to sell their land. **(1)** **Or any other valid point.**

Question			General marking instructions for this type of question	Max mark	Marking instructions for this question
		(iii)	Candidates **suggest** strategies to minimise negative impacts. Credit should be given to any valid strategy regardless of whether they relate to the impacts stated in part (ii). Award **1 mark** for each valid point. Award **0 marks** for a simple list. Award **0 marks** for a strategy that isn't linked to a negative impact.	4	**Possible answers may include:** • as the A27 is a dual carriageway the lorries could be restricted to only using one lane to improve traffic flow for other road users **(1)** • a reduced speed limit for HGVs could be put in place on the A27 **(1)** • the dual carriageway could be upgraded between Havant and Chichester with extra lanes to reduce delays for locals **(1)** • to minimise objections from residents, jobs at the lorry park could be reserved for local people **(1)** • produce sold in the café and shop could focus on local produce to positively impact local businesses **(1)** • Trees could screen the area reducing visual or noise pollution, or absorb air pollution, or potentially reduce the light pollution at night for surrounding land uses **(1)** • the lorry park could be landscaped, and buildings designed to blend in, for example with wood clad buildings or more natural colours. **(1)** **Or any other valid point.**

Question			General marking instructions for this type of question	Max mark	Marking instructions for this question
	(c)	(i)	Candidates **explain** how traffic surveys could be carried out by the Department of Transport. Candidates may also integrate part (i) and (ii) in their response. Award **a maximum of 3 marks** for either or (i) or (ii). Award **1 mark** for each valid point. Award **0 marks** for repeated points from (i) in (ii).	5	**Possible answers may include:** • they would need to decide how many sites to sample as the count would ideally need to take place at the same time at all the data collection points to allow traffic volume to be compared **(1)** • a suitable time needs to be decided on such as 10 minutes, so it does not become too time consuming but still provides sufficient data **(1)** a count of the total volume of traffic could be made at each site using tally marks or click counter **(1)** • a count needs to be made at different times of the day and night, week, and year to identify peak times and if the roads will cope with the increased volume **(1)**. This would give the Department of Transport more data to allow a more reliable analysis of traffic flow. **(1)** For example, they will want to see if the roads would cope in the summer when there is the most tourist traffic, such as ferry traffic to Portsmouth **(1)** • the traffic should also be counted in both directions so two people may be required at each site **(1)** • a tally chart could also count the different types of vehicles at each survey point to find out for example, how many HGVs currently use these roads **(1)** • the Department of Transport could use technology such as traffic sensors that automatically count vehicles over long periods of time **(1)** • Sensors are also able to count the type of vehicles via their weight. **(1)** **Or any other valid point.**

Question			General marking instructions for this type of question	Max mark	Marking instructions for this question
		(ii)	Candidates **discuss** the limitations that could be encountered when collecting the traffic data. Candidates may also integrate part (i) and (ii) in their response. Award **a maximum of 3 marks** for either or (i) or (ii). Award **1 mark** for each valid point. Award **0 marks** for repeated points from (i) in (ii).		**Possible answers may include:** • if tally charts or click counters are being used, then there may not be enough people to count traffic simultaneously at different sites **(1)** • when main routes such as A3(M) or the A259 become extremely busy it may be difficult to accurately count the different types of vehicles **(1)** • if multiple traffic counts need to take place throughout a year this can become very time consuming **(1)** • it would also be very costly for the Department of Transport as lots of people may need to be employed **(1)** • some routes are dual carriageways such as the A259 and may be an unsafe location to carry out a manual traffic count **(1)** • some traffic sensors may not be able to differentiate between different types of vehicles **(1)** • it may also be hard to find a suitable site alongside a road to safely carry out a traffic count **(1)** • the traffic data collected will only be a snapshot and may not represent the true traffic patterns in the area. **(1)** **Or any other valid point.**

Question			General marking instructions for this type of question	Max mark	Marking instructions for this question
	(d)		Candidates **evaluate** the suitability of using proportional symbols to process the traffic data. Award **1 mark** for each valid point.	5	**Possible answers may include:** • proportional symbols can summarise a large data set in a visual form **(1)** • a proportional symbol such as a circle or a bar drawn onto a base map for the total volume of traffic at each traffic survey site would allow you to instantly compare traffic volumes at different locations **(1)** • tracing overlays could then be used to instantly compare results for different times **(1)** • the symbols are easy to interpret because each symbol is proportional to its value **(1)** • each proportional symbol allows for the totals of the different types of vehicles to be shown, such as pie chart segments within a proportional circle **(1)** • if several counts are made throughout the year, then multiple symbols will need to be produced on several maps which is time consuming **(1)** • deciding on a suitable scale for the symbols may not be easy if there is a large range of values **(1)**, eg, if the scale is too large then some symbols may overlap and be difficult to read **(1)** • the size of a symbol may lead to less accurate positioning of the symbol on the map **(1)** • the size of the symbol may obscure the location of the traffic survey **(1)** • if symbols were drawn for each direction on a road, then the map could quickly become very cluttered **(1)** • flow lines may be more appropriate visually as the arrows point in the direction of the traffic count. **(1)** **Or any other valid point.**

page 10

Question			General marking instructions for this type of question	Max mark	Marking instructions for this question
	(e)		Candidates **analyse** the influence **physical** geography has on: (i) Plant and animal habitats (ii) Outdoor recreation and tourism. Credit should be given for effective use of the atlas. Candidates may also integrate part (i) and (ii) in their response. Award **a maximum of 3 marks** for **EITHER** (i) **OR** (ii). Award **1 mark** for each valid point. Award **0 marks** for repeated points from (i) in (ii). Award **0 marks** for indoor tourism activities. Award **0 marks** for references to human geography.	5	**Possible answers may include:** • natural deciduous woodlands such as Ashling Wood in the South Downs National Park and Old Park Wood in 8202 will be the ideal habitats for a variety of birds and mammals such as deer and squirrels **(1)** • areas with a supply of freshwater streams may have an abundance of wildflowers, which in turns allows insects to thrive **(1)** • parts of Chichester Harbour AONB had large expanses of flat, low-lying mud and saltmarsh, which is an ideal food source for local birds and reptiles, for example at Nutbourne Marsh Nature Reserve **(1)** • long stretches of sandy and shingle beaches, such as Sandy Point Nature Reserve in 7498 or Pilse, will provide a different drier habitat and site for feeding and breeding birds **(1)** • the heathland environment on The Spit will also provide a unique habitat for plants like marram grass to grow **(1)** • colonising plants that can tolerate the conditions near the coast will create an environment suitable for small reptiles, insects, and nesting birds **(1)** • the English Channel and inland tidal channels such as Emsworth Channel, will provide a source of food for wildlife **(1)** • Chichester Harbour will provide a natural shelter for wildlife from onshore winds and waves, particularly in winter **(1)** • natural islands in the channels such as at 834028 or in 7599, provide an isolated location for nesting birds. **(1)** The isolation may also allow rarer plants to thrive **(1)** • due to the nature of the landscape containing huge expanses of mud and numerous wide coastal channels, this has restricted human land use and allowed for the large number of nature reserves — at least five in the area **(1)** • the climate of this area has warm summers and mild winters (average 14–16^{0}C July — atlas) which is ideal for a variety of wildlife to inhabit the area **(1).** The milder winters will also encourage migratory birds to the area **(1)**

page 11

Question			General marking instructions for this type of question	Max mark	Marking instructions for this question
					• the sheltered natural channels are ideal for sailing and boating, eg, the boat yard and slipway at Dell Quay in 8302 **(1)** • the English Channel with its onshore winds along the coast, allows for water activities such as windsurfing, eg, in 8096 **(1)** • the beaches such as in 7398 will allow for activities such as sunbathing and access to the sea for swimming **(1)** • Hayling Seaside Railway takes advantage of the flat coastline and stunning views across the English Channel **(1)** • recreational routes such as the Sussex Border Path (7601) take advantage of a low lying, flat route with views of varied landscapes such as water, mud, and sand, with the opportunity to do some bird spotting **(1)** • Chichester/Goodwood Aerodrome and motor racing circuit (8707) is built on gently sloping land that is well drained **(1)** • the warm summers, mild winters, and below average rainfall (only 750mm a year-atlas) will encourage outdoor recreation and tourism all year round **(1)** • the warm ocean current from the southwest (atlas) will aid the use of the English Channel for water sports. **(1)** **Or any other valid point.**

Question			General marking instructions for this type of question	Max mark	Marking instructions for this question
2.	(a)	(i)	Candidates should **describe** the data on the triangular graph. Credit should be given to data with a tolerance of ±1%. Award **a maximum of 2 marks** if no data is mentioned. Award **1 mark** for each valid point. Award **0 marks** if data is more than 1% outside tolerance.	4	**Possible answers may include:** • clustering of developing countries and another cluster of more developed countries can be seen in the graph **(1)** • developing countries such as Bangladesh show a high percentage of its population in the 0-14 category (44–46%) and a lower number in the over 65 category (3%) **(1)** • countries, such as Australia, had a much lower percentage in the 0–14 category (24–26%) and a larger percentage in over 65 (10%) **(1)** which is over three times higher than Bangladesh **(1)** • South Asian countries, such as India, had some of the highest percentages of the population in the 0–14 category (39%) **(1)** • countries that had the highest percentage in the over 65 category are Italy (13%) and Luxembourg (15%) **(1)** • rapidly industrialising countries like Qatar have high percentage in the 15–64 category (68%) **(1)** and the lowest percentage in the over 65 category (2%) **(1)** • countries that had the highest percentage between 15–64 are China (59%) and India (57%) **(1)** • some countries had over 60% of their population in the 15–64 category such as Australia (65%) and Japan (68%). **(1)** **Or any other valid point**

Question			General marking instructions for this type of question	Max mark	Marking instructions for this question
		(ii)	Candidates should **explain** the factors that could account for the pattern of the population structures. Award **1 mark** for each valid point. Award **0 marks** for repeat/reverse points.	5	**Possible answers may include:** • the high percentage of population in the 0–14 category, in countries like Bangladesh, could be because there was a lack of access to family planning and limited availability of contraception in 1980 **(1)** • children in Bangladesh were valued as a source of security because they were expected to care for parents in old age so this encouraged higher birth rates **(1)** • children were also a source of labour for the family, so having more children to work meant more wealth **(1)** • in countries such as Australia, there was a smaller percentage of the population 0–14 as a result of people leaving it later to have children **(1)** • women were beginning to have better access to job opportunities and careers leading to a reduction in birth rates and less population in this category **(1)** • countries such as Italy had a higher percentage of their population in the over 65 age group, which could be because, by the 1980s, countries with higher levels of development had access to more advanced medical facilities, so life expectancy continued increasing **(1)** • vaccinations against diseases also helped to decrease death rates and increase life expectancy **(1)** • increased migration to Middle Eastern countries like Qatar from India and Pakistan for employment meant a much higher percentage in the 15–64 category than many other countries at the time **(1)** • According to the atlas, rainforest and mountainous regions of Peru have few roads and airports meaning people may have less access to medical supplies which could have accounted for a lower life expectancy **(1)** • Climate data, from the atlas, for Bangladesh suggests an average July rainfall of around 500mm increasing the risk of flooding, and diseases like malaria which could have reduced life expectancy. **(1)** **Or any other valid point.**

page 14

Question			General marking instructions for this type of question	Max mark	Marking instructions for this question
		(iii)	Candidates should **evaluate** the effectiveness of using a triangular graph to show this information. Award **1 mark** for each valid point.	3	**Possible answers may include:** • triangular graphs are very useful when comparing three components, such as population structure **(1)** • clusters can emerge which makes it easier to identify relationships/trends **(1)** however, large clusters may make individual countries difficult to identify **(1)** • data must be presented as percentages on the graph **(1)** • Drawing or reading the graph is difficult and it is easy to make errors **(1)** • easy to identify anomalies in the data **(1)** • large amounts of data can be shown on the graph. **(1)** **Or any other valid point**

page 15

Question			General marking instructions for this type of question	Max mark	Marking instructions for this question
	(b)		Candidates should **discuss** the suitability of a statistical technique that could be used to carry out the analysis of the possible relationships within the data sets in Diagram 2. Award a maximum of 3 marks if no statistical technique is named. Award **1 mark** for each valid point. Award **0 marks** for naming the statistical technique.	4	**If correlation suggested:** • Spearman's and Pearsons's test the relationship between two variables **(1)** eg life expectancy and GNI per capita • Spearman's and Pearsons's can help determine the nature of possible relationships between the two variables eg if the relationship is positive or negative **(1)** • Spearman's and Pearson's correlation statistics would test the strength or significance of a possible relationship **(1)** • Pearson's is a more accurate test that Spearman's because it uses actual values rather than ranked values **(1)** • Pearson's works well with interval and ratio data where a linear relationship is suspected **(1)** • Spearman's is easy to use and can identify relationships quickly, especially if a scattergraph is drawn **(1)** • the 10 data points are sufficient for Pearson's or Spearman's **(1)** • Spearman's uses rank values allowing for calculations to be made more easily. **(1)** Ranked values can be 'tied' meaning the reliability of the test is reduced. **(1)** **If linear regression suggested:** • to examine the relationship between data sets, a line of best fit might be calculated through linear regression **(1)** Linear regression is calculated mathematically to ensure the line of best fit is drawn through the points on the scatter graph accurately **(1)** • linear regression will demonstrate the direction and strength of the relationship **(1)** • linear regression is a very visual representation of the relationship **(1)** • linear regression can be time consuming and difficult to calculate. **(1)** **Or any other valid point**

Question			General marking instructions for this type of question	Max mark	Marking instructions for this question
	(c)		Candidates should **suggest** possible consequences of change in population structures. Both positive and negative consequences can be discussed. Award **1 mark** for each valid point. Award **0 marks** for repeat/reverse points.	4	**Possible answers may include:** • countries like Australia who have a higher percentage of their population above 65-years-old will need to provide care for an ageing population which can be complex due to the needs of this section of the population and costly **(1)** • funding pensions will increase and be costly the burden will fall on the working population **(1)** which may mean that retirement age could increase as would taxes **(1)** • the 'grey dollar' will become increasingly important for the economy as people in the above 65 age group have more money to spend in the retail and leisure sectors **(1)** • fall in the working population in countries like Japan will lead to jobs being left unfilled **(1)** • in countries like Italy, the high percentage of the population in 0–14 age group will continue to decline causing possible closures of maternity wards and schools. **(1)** **Or any other valid point**

[END OF MARKING INSTRUCTIONS]