10.3 Ordnance Survey Map Skills: Relief, Contours and Cross Sections: Test Pack

AQA 8035 · Calculators not allowed · about 15 minutes

Total Marks

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 Define a contour line as used on an Ordnance Survey map, in the context of showing relief on a 1:25 000 map extract.

(Total for Question 1 is 1 mark)

2 Figure 1 extract context: upland terrain is described below. Contours are at 20 m intervals. Features listed: trig point TP at 260 m at grid 24 63; spot height SH1 200 m at 22 60; spot height SH2 80 m at 28 58. Using this information only, state which named point is highest on the extract.

(Total for Question 2 is 1 mark)

3 Using Figure 1 description: at grid reference 22 60 the map shows spot height SH1 labelled 200 m. Write down the elevation recorded at 22 60.

(Total for Question 3 is 1 mark)

4 Give two advantages of drawing a cross-section, rather than only describing a contour map extract in writing, when studying the relief of an area.

(Total for Question 4 is 2 marks)

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5 Give one limitation of using a single cross-section, rather than the whole map, to represent the relief of an area.

(Total for Question 5 is 1 mark)

6 State one reason why contour lines on an Ordnance Survey map never cross each other.

(Total for Question 6 is 1 mark)

7 Explain briefly how contour spacing distinguishes a convex slope from a concave slope on a cross-section or map extract.

(Total for Question 7 is 2 marks)

8 Figure 2 extract description: between two separate areas of high ground, each with contours above 220 m, the land dips to a lower point of 160 m at grid reference 32 62, where contours from both areas of high ground curve towards each other without meeting. Identify the OS contour landform term for this dip between two higher areas and give one reason from the description.

(Total for Question 8 is 2 marks)

9 A resurvey found that the highest recorded elevation of a small upland summit had fallen from 86 m to 79 m over several decades, due to long-term weathering and erosion. Calculate the percentage decrease in elevation, giving your answer to one decimal place.

(Total for Question 9 is 2 marks)

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Mark scheme · 10.3 Ordnance Survey Map Skills: Relief, Contours and Cross Sections: Test Pack

Question 1

a line joining points of equal elevation above sea level, oe **B1**

Answer: A line joining points of equal elevation above sea level.

Question 2

TP at 260 m **B1**

Answer: The trig point TP at 260 m is the highest.

Question 3

200 m **B1**

Answer: 200 m.

Question 4

it shows the actual shape of the land, or profile, visually, making it easier to identify a summit, valley or plateau at a glance, oe **B1**

it allows the height and steepness of the land to be compared precisely at different points along a chosen line, oe **B1**

Answer: It shows the actual shape or profile of the land visually, making features such as a summit, valley or plateau easier to identify at a glance, and it allows the height and steepness of the land to be compared precisely at different points along the chosen line.

Question 5

it only shows the relief along the one line that was drawn, so it does not show the relief anywhere else on the map, oe **B1**

Answer: It only shows the relief along the one line that was drawn, so relief elsewhere on the map is not represented.

Question 6

each contour joins points of one specific, single elevation, and a single point on the ground can only be at one height, so lines of different values cannot cross, oe **B1**

Answer: Each contour joins points of one specific elevation, and a single point on the ground can only be at one height, so contours of different values cannot cross at the same point.

Question 7

convex slope has contours that are widely spaced near the top and closer together near the bottom, showing slope steepens downslope, oe **B1**

concave slope has contours closer near the top and more widely spaced near the bottom, showing slope eases downslope, oe **B1**

Answer: A convex slope shows contours that are more widely spaced near the top and closer together lower down, so the slope gets steeper downslope. A concave slope shows closer contours near the top and wider spacing lower down, so the slope eases downslope.

Question 8

a saddle / col **B1**

reason, eg it is a low point between two hills where contours from each hill curve towards each other without joining, oe **B1**

Answer: A saddle or col, shown by a low point between two separate hills where the contours from each curve towards each other without meeting.

Question 9

(86 - 79) / 86 x 100 seen, oe **M1**

8.1% (awrt 8.1%) cao **A1**

Answer: 8.1% (to one decimal place).

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