

2.8 Vectors Mark Scheme

Q1.

(a) Mark is for AO2 (apply)

-2;

(b) Mark is for AO2 (apply)

[8, 3];

I. missing brackets

I. wrong type of brackets

(c) Marks are for AO2 (apply)

Calculation	Result
U	[1, 1]
v = [position of hero] - [position of enemy]	[6, -4];
u.v	2;
EnemyCanSee	True;

A. different answers that have been correctly calculated based on an incorrect answer for 5.2

(d) 1 mark for AO1 (knowledge)

heuristic approach employs a method of finding a solution that might not be the best;

1 mark for AO1 (understanding)

algorithm might need to consider visiting less/fewer cells/co-ordinates // algorithm might use knowledge of the domain to cut-down the search space // algorithm might consider visiting certain cells/coordinates first;

[7]

2

1

1

3

Examiner reports

Q1.

This was the first A Level exam question on the topic of vectors and most students were well-prepared for this topic though there were clear differences between centres with students from some centres showing no familiarity with this area of the syllabus. A significant number of students found calculations that involved negative numbers more difficult.

The explanations of what a heuristic technique is often showed some understanding but were too vague to be creditworthy.

