1.3 Sets, Set Notation and Venn Diagrams: 10-minute Pack

AQA 8365 · Calculator allowed · about 10 minutes

Total Marks

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 E = {1, 2, 3, ..., 12}. A is the set of factors of 12. B is the set of even numbers in E. C is the set of multiples of 3 in E.

(a) List the elements of A intersect B intersect C (the numbers common to all three sets). **(2)**

(b) List the elements that are in both A and B, but not in C. **(3)**

(Total for Question 1 is 5 marks)

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2 Which of the following correctly describes A union B, for two sets A and B?

- ☐ A) All elements in A and B
- ☐ B) All elements in A or B, or both
- ☐ C) All elements in A but not in B
- ☐ D) The empty set

(Total for Question 2 is 1 mark)

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3 A = {x : 1 < x ≤ 16, x is an integer}. B = {x : x is one of the multiples of 4}. List the members of A intersect B.

(Total for Question 3 is 3 marks)

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Mark scheme · 1.3 Sets, Set Notation and Venn Diagrams: 10-minute Pack

Question 1

(a) identifies at least one correct common element with valid reasoning	**M1**
(a) {6, 12} cao	**A1**

(a) Answer: {6, 12}

(b) finds A intersect B = {2, 4, 6, 12}	**M1**
(b) removes the elements of A intersect B that are also in C	**M1**
(b) {2, 4} cao	**A1**

(b) Answer: {2, 4}

Question 2

B cao	**B1**

Answer: B) All elements in A or B, or both

Question 3

lists A: 2 to 16	**M1**
identifies the multiples of 4 in A	**M1**
{4, 8, 12, 16} cao	**A1**

Answer: {4, 8, 12, 16}

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