HIGHER

1.1 Sets and Venn Notation: 10-minute Pack

EDEXCEL 4MA1 · Calculator allowed · about 10 minutes

Total Marks

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 The universal set is the set of whole numbers from 1 to 20.
A = {numbers greater than 4}, B = {odd numbers}.
List the members of the set A union B.

(Total for Question 1 is 4 marks)

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2 In a survey of 47 people, n(A) = 18, n(B) = 19 and n(C) = 22, where A, B and C are three sets. n(A intersection B) = 5, n(A intersection C) = 7, n(B intersection C) = 6 and n(A intersection B intersection C) = 1.
Work out the number of people who are in the set A but not in the set B. (Use n(A) and n(A intersection B).)

(Total for Question 2 is 3 marks)

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Mark scheme · 1.1 Sets and Venn Notation: 10-minute Pack

Question 1

A = {5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20}	**B1**
B = {1, 3, 5, 7, 9, 11, 13, 15, 17, 19}	**B1**
applies A union B to these lists	**M1**
A union B = {1, 3, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20}	**A1**

Answer: A union B = {1, 3, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20}

Question 2

uses n(A but not B) = n(A) - n(A intersection B), oe; may be implied by the correct numerical subtraction	**M1**
n(A) - n(A intersection B) = 18 - 5	**M1**
13	**A1**

Answer: 13

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