4.1 Matrix Operations: Addition, Subtraction and Multiplication: 10-minute Pack

AQA 8365 · Calculator allowed · about 10 minutes

Total Marks

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 A = [[5, -3], [2, 4]] and B = [[-2, 1], [6, -5]].

(a) Find A + B. **(2)**

.....

(b) Find A - B. **(2)**

.....

(c) Write down B - A, using your answer to part (b) without further calculation. **(1)**

.....

(Total for Question 1 is 5 marks)

---

2 A = [[a, 2], [1, b]]. Given that A x [[1], [-1]] = [[4], [-3]], find the values of a and b.

(a) Find the value of a. **(2)**

.....

(b) Find the value of b. **(2)**

.....

(Total for Question 2 is 4 marks)

© Revision Library | revisionlibrary.co.uk

Mark scheme · 4.1 Matrix Operations: Addition, Subtraction and Multiplication: 10-minute Pack

Question 1

(a) adds corresponding entries, with at least two entries correct **M1**

(a) [[3, -2], [8, -1]] cao **A1**

(a) Answer: [[3, -2], [8, -1]]

(b) subtracts corresponding entries, with at least two entries correct **M1**

(b) [[7, -4], [-4, 9]] cao **A1**

(b) Answer: [[7, -4], [-4, 9]]

(c) [[-7, 4], [4, -9]], the negative of the matrix found in (b) **B1**

(c) Answer: [[-7, 4], [4, -9]]

Question 2

(a) forms the equation $a(1) + 2(-1) = 4$, i.e. $a - 2 = 4$ **M1**

(a) $a = 6$ cao **A1**

(a) Answer: a = 6

(b) forms the equation $1(1) + b(-1) = -3$, i.e. $1 - b = -3$ **M1**

(b) $b = 4$ cao **A1**

(b) Answer: b = 4

© Revision Library | revisionlibrary.co.uk