5.6 Changing the Subject of a Formula: 10-minute Pack

Total Marks

EDEXCEL 1MA1 · Calculator allowed · about 10 minutes

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 Make d the subject of the formula c = 3d.

(Total for Question 1 is 1 mark)

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2 The formula F = m × a links force F, mass m and acceleration a.

(a) Make m the subject of F = m × a. **(2)**

(b) Calculate m when F = 50 N and a = 2.5 m/s^2. Give your answer to 1 decimal place. **(2)**

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(Total for Question 2 is 4 marks)

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3 Rearrange the formula p = 3/(2t + 5) to make t the subject. Give your answer in terms of p.

(Total for Question 3 is 3 marks)

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Mark scheme · 5.6 Changing the Subject of a Formula: 10-minute Pack

Question 1

d = c/3 cao	**B1**

Answer: d = c/3

Question 2

(a) divide both sides by a or show method leading to m = F/a	**M1**
(a) m = F/a cao	**A1**

(a) Answer: m = F/a

(b) substitute values into m = F/a and calculate 50/2.5	**M1**
(b) 20.0 kg awrt	**A1**

(b) Answer: 20.0 kg

Question 3

multiply both sides by (2t + 5): p(2t + 5) = 3 or equivalent	**M1**
expand or collect terms to isolate t: 2pt + 5p = 3 -> 2pt = 3 - 5p	**M1**
t = (3 - 5p)/(2p) cao	**A1**

Answer: t = (3 - 5p)/(2p)

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