HIGHER

7.7 Rearranging Harder Formulae: 10-minute Pack

Total Marks

EDEXCEL 1MA1 · Calculator allowed · about 10 minutes

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 Make f the subject of $1/f = 1/a + 1/b$.

(Total for Question 1 is 2 marks)

2 Rearrange $S = 3x/(x + 2)$ to make x the subject. Give your answer in simplest form.

(Total for Question 2 is 3 marks)

3 Make a the subject of $s = ut + 0.5\ a\ t^2$.

(Total for Question 3 is 2 marks)

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Mark scheme · 7.7 Rearranging Harder Formulae: 10-minute Pack

Question 1

combine RHS: $1/f = (a + b)/(ab)$	**M1**
$f = ab/(a + b)$ cao	**A1**

Answer: $f = ab/(a + b)$

Question 2

multiply both sides by $(x + 2)$ to get $S(x + 2) = 3x$	**M1**
collect x terms to reach $x(3 - S) = 2S$	**M1**
$x = 2S/(3 - S)$ cao	**A1**

Answer: $x = 2S/(3 - S)$

Question 3

isolate the a term: $s - ut = 0.5\ a\ t^2$	**M1**
$a = 2(s - ut)/t^2$ cao	**A1**

Answer: $a = 2(s - ut)/t^2$

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