

Changing the Subject of the Formula

Question Paper

Level	IGCSE
Subject	Maths
Exam Board	Edexcel
Topic	Equations, Formulae and Identities
Sub Topic	Changing the subject of the formula (Algebraic manipulation)
Booklet	Question Paper

Time Allowed: 46 minutes

Score: /38

Percentage: /100

Grade Boundaries:

A*	A	B	C	D	E	U
>85%	75%	70%	60%	55%	50%	<50%

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1 Make y the subject of $3(y + 2x - 1) = x + 5y$

$y = \dots\dots\dots$

(Total for Question 1 is 3 marks)

2 Make h the subject of the formula $A = 2\pi r(r + h)$

$h = \dots\dots\dots$

(Total for Question 2 is 2 marks)

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3 Make n the subject of the formula

$$t = \sqrt{\frac{n+3}{n}}$$

$n = \dots\dots\dots$

(Total for Question 3 is 4 marks)

4 Given that y is positive, make y the subject of $y = \sqrt{ay^2 + n}$

Show clear algebraic working.

$y = \dots\dots\dots$

(Total for Question 4 is 5 marks)

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5 Make r the subject of the formula $A = 4r^2 - \pi r^2$ where r is positive.

$r = \dots\dots\dots$

(Total for Question 5 is 3 marks)

6 Make x the subject of $y = \sqrt{\frac{2x+1}{x-1}}$

$\dots\dots\dots$

(Total for Question 6 is 4 marks)

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7 (a) Factorise $2t^2 - 7t + 3$

.....
(2)

(b) Rearrange the formula $y = a - bx^2$ to make x the subject.

$x =$
(3)

(Total for Question 7 is 5 marks)

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8 Make r the subject of the formula $A = 4\pi r^2$ where r is positive.

$r = \dots\dots\dots$

(Total for Question 8 is 2 marks)

9 Make t the subject of $5(t - g) = 2t + 7$

$\dots\dots\dots$

(Total for Question 9 is 3 marks)

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10 Make g the subject of $3e + 4g = 7 + 9eg$

.....
(Total for Question 10 is 3 marks)

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11 Make t the subject of the formula $m = \frac{t + 1}{t - 3}$

(Total for Question 11 is 4 marks)
