IGCSE · Cambridge (CIE) · Maths

57 mins 20 questions

Calculator Questions

Rearranging Formulas

Formulas where Subject Appears Once / Formulas where Subject Appears Twice

Easy (4 questions)	/8
Medium (5 questions)	/14
Hard (6 questions)	/17
Very Hard (5 questions)	/18
Total Marks	**/57**

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Easy Questions

1 Make x the subject of this formula.

$$2y = 5x - 7$$

$x =$ .....

(2 marks)

2 Rearrange the formula $5w - 3y + 7 = 0$ to make w the subject.

$w =$ .....

(2 marks)

3 Rearrange $2(w + h) = P$ to make w the subject.

$w =$ .....

(2 marks)

4 Make p the subject of

$$5p + 7 = m.$$

$p =$ .....

(2 marks)

Medium Questions

1 Rearrange $2(4x - y) = 5x - 3$ to make y the subject.

y = ...

(3 marks)

2 Make t the subject of the formula $s = k - t^2$.

t = ...

(2 marks)

3 Make y the subject of the formula $p = \sqrt{\frac{x + y}{5}}$

(3 marks)

4 Make t the subject of the formula $2(d - t) = 4t + 7$

(3 marks)

5 Make *m* the subject of the formula $v = \sqrt{\frac{2E}{m}}$

(3 marks)

Hard Questions

1 $y = \sqrt{u^2 x}$

Rearrange the formula to write x in terms of u and y.

x = ...

(2 marks)

2 Make x the subject of the formula.

$$x = \frac{3 + x}{y}$$

x = ...

(3 marks)

3 Make p the subject of

$$y^2 - 2p^2 = h.$$

p = ...

(3 marks)

4 $$s = ut + \frac{1}{2}at^2$$

Rearrange the formula to write a in terms of u, t and s.

a = ...

(3 marks)

5 Make P the subject of the formula $A = P + \frac{PRT}{100}$.

P = ...

(3 marks)

6 $m = \sqrt{\frac{k^3 + 1}{4}}$

Make k the subject of the formula.

(3 marks)

Very Hard Questions

1 The equation $\frac{x^2}{2} + \frac{1}{x^2} - \frac{2}{x} = 3x + 1$ can be written as $x^4 + ax^3 + bx^2 + cx + 2 = 0$.

Find the values of a, b and c.

a = ...

b = ...

c = ...

(3 marks)

2 The equation $\frac{x^3}{3} - \frac{1}{2x^2} + 4 = 0$ can be written in the form $ax^n + bx^{n-3} - 3 = 0$.

Find the value of a, the value of b and the value of n.

$a =$ .....

$b =$ .....

$n =$ .....

(3 marks)

3 Rearrange the formula to make x the subject.

$$k = \frac{2m - x}{x}$$

(4 marks)

4 Make *y* the subject of the formula

$$t = \frac{2 - 3y}{y + 2}$$

(4 marks)

5 Make *m* the subject of

$$\frac{m}{v} - \frac{t}{b} = \frac{m - t}{R}$$

(4 marks)