

# Rearranging Harder Formulae

## Question Paper

Level	GCSE
Subject	Maths
Exam Board	Edexcel GCSE
Topic	Rearranging Harder Formulae
Grade Level	Grade 7
Booklet	Question Paper

**Time Allowed:** 58 minutes

**Score:** /48

**Percentage:** /100

**Grade Boundaries:**

1. Rearrange  $a(q - c) = d$  to make  $q$  the subject.

$$q = \dots\dots\dots$$

(3)

(Total 5 marks)

2. (a) Make  $n$  the subject of the formula  $m = 5n - 21$

$$n = \dots\dots\dots$$

(2)

(b) Make  $p$  the subject of the formula  $4(p - 2q) = 3p + 2$

$$p = \dots\dots\dots$$

(3)

(Total 5 marks)

3.

$$P = \pi r + 2r + 2a$$

Make  $r$  the subject of the formula

$$r = \dots\dots\dots$$

(Total 3 marks)

4. Make  $a$  the subject of the formula

$$2(3a - c) = 5c + 1$$

.....

**(Total 3 marks)**

5. Make  $m$  the subject of the formula

$$2(2p + m) = 3 - 5m$$

$m =$  .....

**(Total 3 marks)**

6. Make  $x$  the subject of

$$5(x - 3) = y(4 - 3x)$$

$$x = \dots\dots\dots$$

**(Total 4 marks)**

7. When you are  $h$  feet above sea level, you can see  $d$  miles to the horizon, where

$$d = \sqrt{\frac{3h}{2}}$$

Make  $h$  the subject of the formula

$$h = \dots\dots\dots$$

**(Total 4 marks)**

8.  $y = \frac{2pt}{p-t}$

Rearrange the formula to make  $t$  the subject.

$t = \dots\dots\dots$

**(Total 4 marks)**

9. Make  $b$  the subject of the formula  $a = \frac{2-7b}{b-5}$

$\dots\dots\dots$

**(Total 4 marks)**

10.  $P = \frac{n^2 + a}{n + a}$

Rearrange the formula to make  $a$  the subject.

$a = \dots\dots\dots$

**(Total 4 marks)**

11.  $\frac{x}{x + c} = \frac{p}{q}$

Make  $x$  the subject of the formula.

$x = \dots\dots\dots$

**(Total 4 marks)**

12. Rearrange  $\frac{1}{u} + \frac{1}{v} = \frac{1}{f}$

to make  $u$  the subject of the formula.

Give your answer in its simplest form.

.....  
(Total 5 marks)