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| Surname               |  |
| Other Names           |  |
| Candidate's Signature |  |

## GCSE 9 - 1 Questions

### Changing the Subject Non-Linear

**Calculator Not Allowed**

#### INSTRUCTIONS TO CANDIDATES

Write your name in the space provided.

Write your answers in the spaces provided in this question paper.

Answer ALL questions.

Any working should be clearly shown in the spaces provided since marks may be awarded for partially correct solutions.

You should have a ruler, compass and protractor where required.

**Total Marks :**

1) Rearrange the formula  $W = \frac{\sqrt{X}}{Y}$   
to make X the subject.

Answer X = \_\_\_\_\_ [2]

2) Make  $f$  the subject of the formula. [3]

$$ef - d = kf + t$$

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3) Make  $x$  the subject of the following formula. [4]

$$a(x - b) = x(c - d)$$

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4) (a) Make  $g$  the subject of the following formula. [2]

$$tg^2 = m$$

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(b) Make  $q$  the subject of the following formula. [3]

$$hq - c = yq + f$$

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- 5) Make  $p$  the subject of the following formula. [3]

$$t + 6p = 5 - pq$$

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- 6) Rearrange the following formulae to make  $y$  the subject.

(a)  $y^2 - t = g$

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[2]

(b)  $\frac{3y + w}{2y + 3} = 5$

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[4]

7) Rearrange  $tx + tc = c^2 - cx$  to make  $x$  the subject.

Answer  $x =$  \_\_\_\_\_ [3]

8) Make  $y$  the subject of the expression  $\frac{a - y}{a + y} = \frac{b}{c}$

Answer \_\_\_\_\_ [4]

9) Rearrange the following formula to make  $c$  the subject.

$$4c - d = 2a + bc \quad [3]$$

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- 10) Rearrange the following to make  $r$  the subject of the formula

$$A = \frac{4\pi r^2}{3}$$

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[3]

- 11) Rearrange the formula  $y = \frac{8(x-t)}{(x+t)}$  to make  $x$  the subject.

Answer  $x =$  \_\_\_\_\_ [4]

- 12) Make  $g$  the subject of the following formula.  
You must simplify your answer.

[3]

$$\sqrt{3g+f} = h^2$$

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- 13) Rearrange the following formula to make  $w$  the subject. [3]

$$3w - 7t = x + tw$$

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- 14)(a) Rearrange the following formula to make  $k$  the subject. [2]

$$3k^2 = m$$

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- (b) Rearrange the following formula to make  $g$  the subject. [2]

$$eg + fg = h$$

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15)

Rearrange the following formula to make  $h$  the subject.

[4]

$$\frac{5h + 3k}{h + 4} = 2$$

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