

GCSE QUESTIONS

Q1. NON-CALCULATOR

$$T = \frac{q}{2} + 5$$

Here is Spencer's method to make q the subject of the formula.

$$2 \times T = q + 5$$

$$q = 2T - 5$$

What mistake did Spencer make in the first line of his method?

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.....

.....

(Total for question = 1 mark)

Q2. NON-CALCULATOR

Make s the subject of $v^2 = u^2 + 2as$

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(Total for question = 2 marks)

Q3. NON-CALCULATOR

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

Make k the subject of the formula.

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(Total for question is 3 marks)

Q4. NON-CALCULATOR

Make a the subject of $a + 3 = \frac{2a + 7}{r}$

.....
(Total for question = 3 marks)

Q5. NON-CALCULATOR

Make t the subject of the formula $k = \frac{2(t + 3)}{t - 3}$

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(Total for question = 4 marks)

Q6. NON-CALCULATOR

$x^2 - 9y^2 = 0$ where $x > 0$ and $y > 0$

Work out the ratio $x : y$

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(Total for question = 3 marks)

Q7. NON-CALCULATOR

The ratio $(y + x) : (y - x)$ is equivalent to $k : 1$

Show that $y = \frac{x(k + 1)}{k - 1}$

(Total for question = 3 marks)

Q8. CALCULATOR ALLOWED

Make x the subject of the formula $y = 2x + 4$

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(Total for question = 2 marks)

Q9. CALCULATOR ALLOWED

Make t the subject of the formula $w = 3t + 11$

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(Total for question is 2 marks)

Q10. CALCULATOR ALLOWED

Make h the subject of the formula $c = 3h + 5$

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(Total for question = 2 marks)

Q11. CALCULATOR ALLOWED

Make v the subject of the formula $T = 4v + 3$

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(Total for question = 2 marks)

Q12. CALCULATOR ALLOWED

$$q = \frac{p}{r} + s$$

Make p the subject of this formula.

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(Total for question = 2 marks)

Q13. CALCULATOR ALLOWED

Make t the subject of the formula $y = \frac{t}{3} - 2a$

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(Total for question = 2 marks)

Q14. CALCULATOR ALLOWED

Make k the subject of the formula $y = \sqrt{2m - k}$

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(Total for question = 2 marks)

Q15. CALCULATOR ALLOWED

Make g the subject of the formula

$$T = \sqrt{\frac{g+6}{2}}$$

.....
(Total for question = 3 marks)

Q16. CALCULATOR ALLOWED

Make t the subject of

$$p = \sqrt{a + \frac{t}{2}}$$

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(Total for question = 3 marks)

Q17. CALCULATOR ALLOWED

Make m the subject of

$$f = \frac{4-3m}{5+m}$$

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(Total for question = 4 marks)

Q18. CALCULATOR ALLOWED

(a) Simplify $\frac{x^2 - 16}{2x^2 - 5x - 12}$

(b) Make v the subject of the formula $w = \frac{15(t - 2v)}{v}$

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(3)

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(3)
(Total for question = 6 marks)