

GCSE QUESTIONS WITH CLUES

Q1. NON-CALCULATOR

Factorise $3n + 12$



.....
(Total for question = 1 mark)

Q2. NON-CALCULATOR

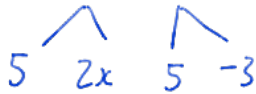
Factorise $4m + 12$



.....
(Total for question = 1 mark)

Q3. NON-CALCULATOR

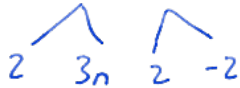
Factorise $10x - 15$



.....
(Total for question = 1 mark)

Q4. NON-CALCULATOR

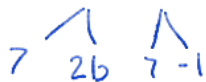
Factorise $6n - 4$



.....
(Total for question = 1 mark)

Q5. NON-CALCULATOR

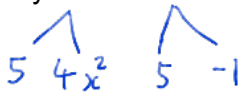
Factorise $14b - 7$



.....
(Total for question = 1 mark)

Q6. NON-CALCULATOR *Difference of two squares*

Factorise fully $20x^2 - 5$

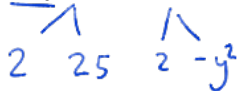


$5(4x^2 - 1)$

.....
(Total for question = 2 marks)

Q7. NON-CALCULATOR *Difference of two squares*

Factorise fully $50 - 2y^2$



$2(25 - y^2)$

.....
(Total for question = 2 marks)

Q8. NON-CALCULATOR

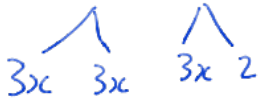
Factorise $m^2 + m$



.....
(Total for question = 1 mark)

Q9. NON-CALCULATOR

Factorise fully $9x^2 + 6x$



.....
(Total for question = 2 marks)

Q10. NON-CALCULATOR

Factorise fully $9b - 3b^2$



.....
(Total for question = 2 marks)

Q11. NON-CALCULATOR

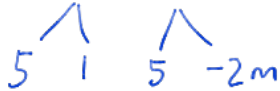
Factorise $y^2 + 27y$



.....
(Total for question = 1 mark)

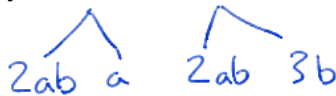
Q12. NON-CALCULATOR

(a) Factorise $5 - 10m$



.....
(1)

(b) Factorise fully $2a^2b + 6ab^2$



.....
(2)
(Total for question = 3 marks)

Q13. NON-CALCULATOR

Factorise $x^2 - 16$

Difference of two squares

$$= x^2 + 0x - 16$$

.....
(Total for question is 1 mark)

Q14. NON-CALCULATOR

Factorise $a^2 - b^2$

Difference of two squares

$$= a^2 + 0a - b^2$$

.....
(Total for question = 1 mark)

Q15. NON-CALCULATOR

Factorise $x^2 - 169$

Difference of two squares

$$= x^2 + 0x - 169$$

.....
(Total for question = 1 mark)

Q16. NON-CALCULATOR

Difference of two squares

Factorise $x^2 - 121$

$$= x^2 + 0x - 121$$

.....
(Total for question = 1 mark)

Q17. NON-CALCULATOR

Factorise $y^2 + 7y + 6$

total of this *factors of this*

+6	
1	6
2	3
-1	-6
-2	-3

.....
(Total for question = 2 marks)

Q18. NON-CALCULATOR

Factorise $x^2 + 6x + 9$

total of this *factors of this*

+9	
1	9
3	3
-1	-9
-3	-3

.....
(Total for question = 1 mark)

Q19. NON-CALCULATOR

Factorise $x^2 + 4x + 3$

total of this *factors of this*

+3	
1	3
-1	-3

.....
(Total for question = 2 marks)

Q20. NON-CALCULATOR

Factorise $x^2 + 3x - 4$

total of this *factors of this*

-4	
1	-4
2	-2
-1	4

.....
(Total for question is 2 marks)

Q21. NON-CALCULATOR

(a) Factorise $3f + 9$

3	f	+	3	3
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.....
(1)

(b) Factorise $x^2 - 2x - 15$

total of this *factors of this*

-15	
1	-15
3	-5
-1	15
-3	5

.....
(2)
(Total for question = 3 marks)

Q22. NON-CALCULATOR

Factorise $3(x - y)^2 - 2(x - y)$

$$(x-y) \begin{matrix} \diagup \\ 3(x-y) \end{matrix} \quad (x-y) \begin{matrix} \diagup \\ -2 \end{matrix}$$

.....
(Total for question = 2 marks)

Q23. NON-CALCULATOR

Josh is trying to factorise $x^2 - 6x + 8$

His reasoning is,

because $4 \times 2 = 8$

and $4 + 2 = 6$

then $x^2 - 6x + 8 = (x + 4)(x + 2)$

(b) Explain what is wrong with Josh's reasoning.

.....

(Total for question = 1 mark)