CLASSIFIED
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MATHEMATIC A

TOPIC- Expressions and formulae

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7 (a) Factorise $2t^2 - 7t + 3$

.....

(2)

(b) Rearrange the formula $y = a - bx^2$ to make x the subject.

$x =$ .....

(3)

(Total for Question 7 is 5 marks)

8 Make r the subject of the formula $A = 4\pi r^2$ where r is positive.

$r =$ .....

(Total for Question 8 is 2 marks)

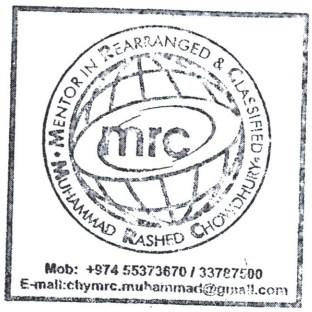
9 Make t the subject of $5(t - g) = 2t + 7$

(Total for Question 9 is 3 marks)

10 Make g the subject of $3e + 4g = 7 + 9eg$

(Total for Question 10 is 3 marks)

19 Make g the subject of $3e + 4g = 7 + 9eg$



(Total for Question 19 is 3 marks)

20 Express $\frac{3}{x+2} - \frac{6}{2x+5}$ as a single fraction.

Simplify your answer.

(Total for Question 20 is 3 marks)

1 Make y the subject of $3(y + 2x - 1) = x + 5y$

$y =$ .....

(Total for Question 1 is 3 marks)

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2 Make h the subject of the formula $A = 2\pi r(r + h)$

$h =$ .....

(Total for Question 2 is 2 marks)

14 (a) Simplify $\left(\sqrt{x}\right)^8$

(b) Solve $\dfrac{6+4y}{3} = 5 - 2y$

Show clear algebraic working.

$y =$ .....

(4)

(c) Make g the subject of $g - 1 = gh + 3h$

.....

(3)

(Total for Question 14 is 8 marks)

18 Make t the subject of the formula $m = \dfrac{t+1}{t-3}$

(Total for Question 18 is 4 marks)

19 Make e the subject of $k = \sqrt{\dfrac{5m + 2e}{3e}}$

(Total for Question 19 is 4 marks)

20 $x = 3$ correct to 1 significant figure.
$y = 8.37$ correct to 3 significant figures.
$z = 5.3$ correct to 1 decimal place.

Calculate the upper bound of $x(y - z)$
Show your working clearly.

(Total for Question 20 is 3 marks)

3 Make n the subject of the formula

$$t = \sqrt{\frac{n+3}{n}}$$

$n =$ .....

(Total for Question 3 is 4 marks)

4 Given that y is positive, make y the subject of $y = \sqrt{ay^2 + n}$

Show clear algebraic working.

$y =$ .....

(Total for Question 4 is 5 marks)

5 Make r the subject of the formula $A = 4r^2 - \pi r^2$ where r is positive.

$r =$ .....

(Total for Question 5 is 3 marks)

6 Make x the subject of $y = \sqrt{\dfrac{2x+1}{x-1}}$

.....

(Total for Question 6 is 4 marks)