Questions

Q1.

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

r = ...

(Total for question = 2 marks)

Q2.

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

h = ...

(Total for question = 2 marks)

Q3.

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

y = ...

(Total for question is 3 marks)

Q4.

(a) Expand and simplify

(i) $5(2x + 1) - 3(3x - 1)$

.....

(ii) $(y + 5)(y - 7)$

.....

(4)

(b) Make r the subject of the formula $V = \pi r^2 h$ where r is positive.

$r =$ .....

(2)

(Total for question = 6 marks)

Q5.

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

.....

(Total for Question is 4 marks)

Q6.

Make n the subject of the formula

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

$n =$ .....

(Total for question = 4 marks)

Q7.

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

Show clear algebraic working.

$y =$ .....

(Total for Question is 5 marks)

Q8.

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

$r =$ .....

(Total for Question is 3 marks)

Q9.

(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 is 5 marks)

Q10.

(a) Factorise $c^2 - 5c$

.....

(2)

(b) Simplify $d^5 \times d^7$

.....

(1)

(c) Factorise $x^2 + x - 30$

.....

(2)

(d) Make b the subject of $P = \frac{1}{2}ab^2$

b = ...

(2)

(e) Solve $\frac{2x+1}{3} + \frac{x-5}{2} = 4$

Show clear algebraic working.

x = ...

(4)

(Total for question = 11 marks)