Question 1 (4 Marks)

(a) Complete the table of values for $y = 6x - x^3$

| x	-3	-2	-1	0	1	2	3
y	9					4	-9

(2)

(b) On the grid, draw the graph of $y = 6x - x^3$ for values of x from -3 to 3
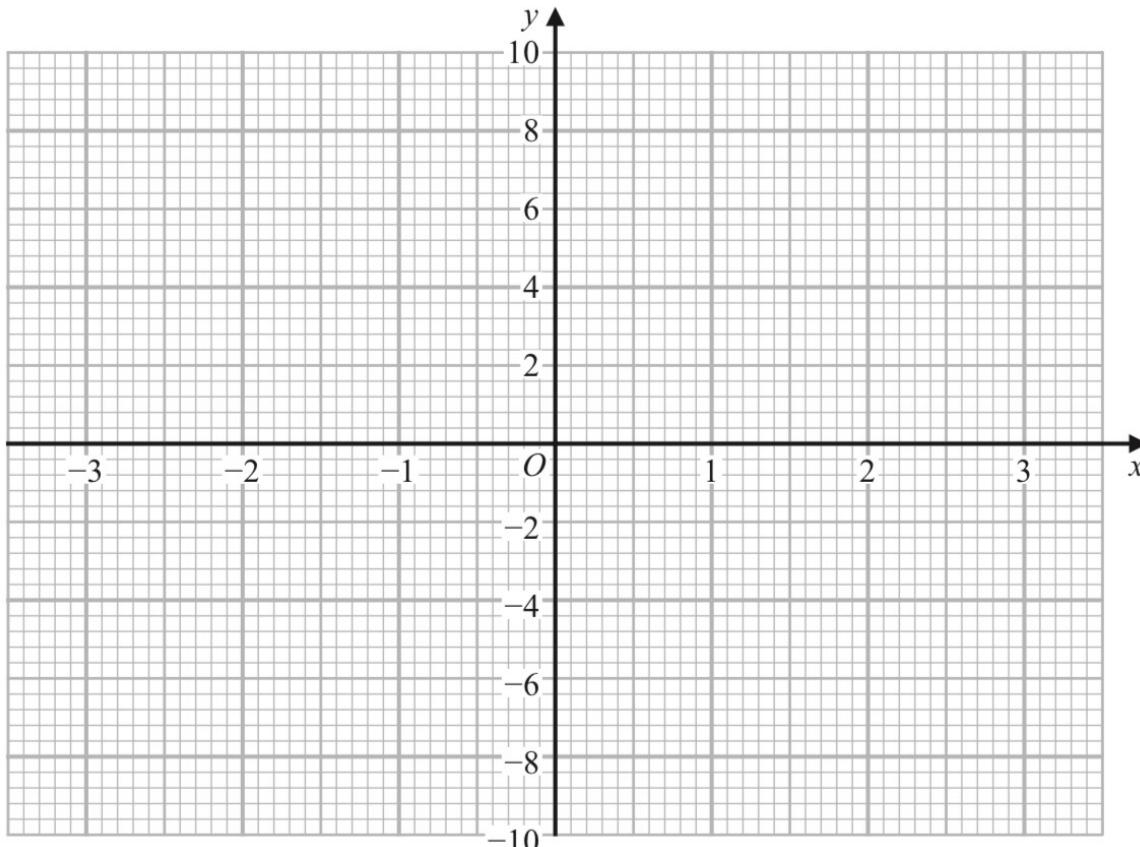
(2)

Question 2 (4 Marks)

The diagram shows a logo made from three circles.
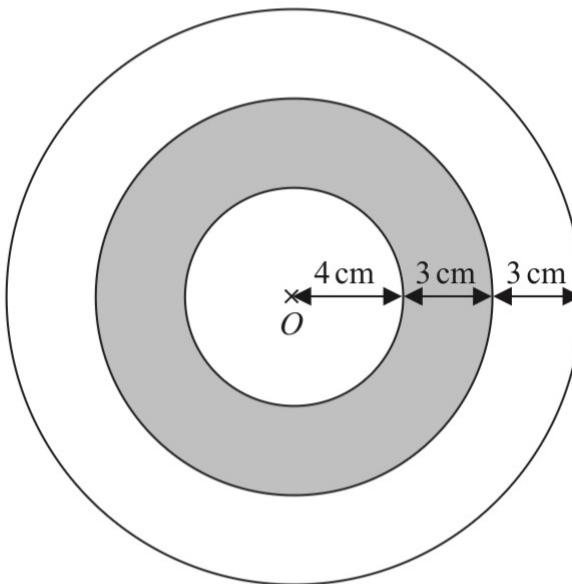
Each circle has centre O.

Daisy says that exactly $\dfrac{1}{3}$ of the logo is shaded.

Is Daisy correct?
You must show all your working.

Question 3 (4 Marks)

(a) Work out an estimate for the value of $\sqrt{63.5 \times 101.7}$

....

(2)

$(2.3)^6 = 148$ correct to 3 significant figures.

(b) Find the value of $(0.23)^6$ correct to 3 significant figures.

....

(1)

(c) Find the value of 5^{-2}

....

(1)

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Question 4 (3 Marks)

Solve the simultaneous equations

$$5x + y = 21$$
$$x - 3y = 9$$

$x = $ ....

$y = $ ....

(Total 15 Marks)