

## SAMPLE PAPER 3: PAPER 1

### QUESTION 6 (25 MARKS)

#### Question 6 (a)

$$y = f(x) = 9 - x^2$$

$$x = -3: f(-3) = 9 - (-3)^2 = 9 - 9 = 0$$

$$x = -2: f(-2) = 9 - (-2)^2 = 9 - 4 = 5$$

$$x = -1: f(-1) = 9 - (-1)^2 = 9 - 1 = 8$$

$$x = 0: f(0) = 9 - (0)^2 = 9 - 0 = 9$$

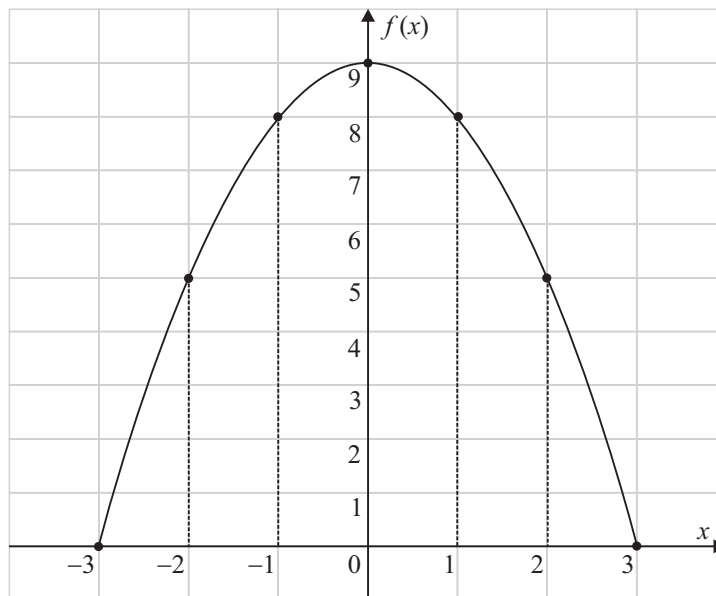
$$x = 1: f(1) = 9 - (1)^2 = 9 - 1 = 8$$

$$x = 2: f(2) = 9 - (2)^2 = 9 - 4 = 5$$

$$x = 3: f(3) = 9 - (3)^2 = 9 - 9 = 0$$

$x$	-3	-2	-1	0	1	2	3
$f(x)$	0	5	8	9	8	5	0

#### Question 6 (b)



#### Question 6 (c)

$$A = \frac{1}{2} \{0 + 0 + 2(5 + 8 + 9 + 8 + 5)\} = 35$$


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