Evaluating Functions

To evaluate a function, you simply substitute the value into the function rule and simplify.

Example: **Find f(5) – if** $f(x) = 3x^2 – 2x + 1$

Substitute 5 for x $f(5) = 3(5)^2 – 2(5) + 1$

$= 3(25) – 10 + 1$

$= 75 – 10 + 1$

$= 66$

∴ f(5) = 66. Graphically we would have the point (5, 66)

Find the value of the following functions.

1. $f(x) = 3x – 2$ when $x = 5$
2. $h(x) = 4x + 5$ when $x = 10$
3. $p(x) = x^2 + 3$ when $x = 4$
4. $t(x) = x^2 – 6$ when $x = 3$
5. Find $l(4)$ when $l(x) = 3x^2 – 2x + 1$
6. Find $q(–2)$ when $q(x) = 5x^2 – 4$
7. Find $f(–4)$ when $f(x) = x^3$
8. Find $g(3)$ when $g(x) = |2x – 3|$
9. Find $t(0)$ if $t(x) = 3x^2 – 4x + 5$
10. Find $m(–2)$ if $m(x) = 4x – 2$
11. Find $q(0)$ if $q(x) = 7x^3 – 3x^2 + 5x – 7$
12. Find $f(0)$ if $f(x) = 10x^5 – 6x^4 + 2x^3 – 8x^2 + 7x + 4$