MAPLE Demo 1−25−07

>

Defining functions. Start with f(x)=x^2.

> $f := x \rightarrow x^2;$

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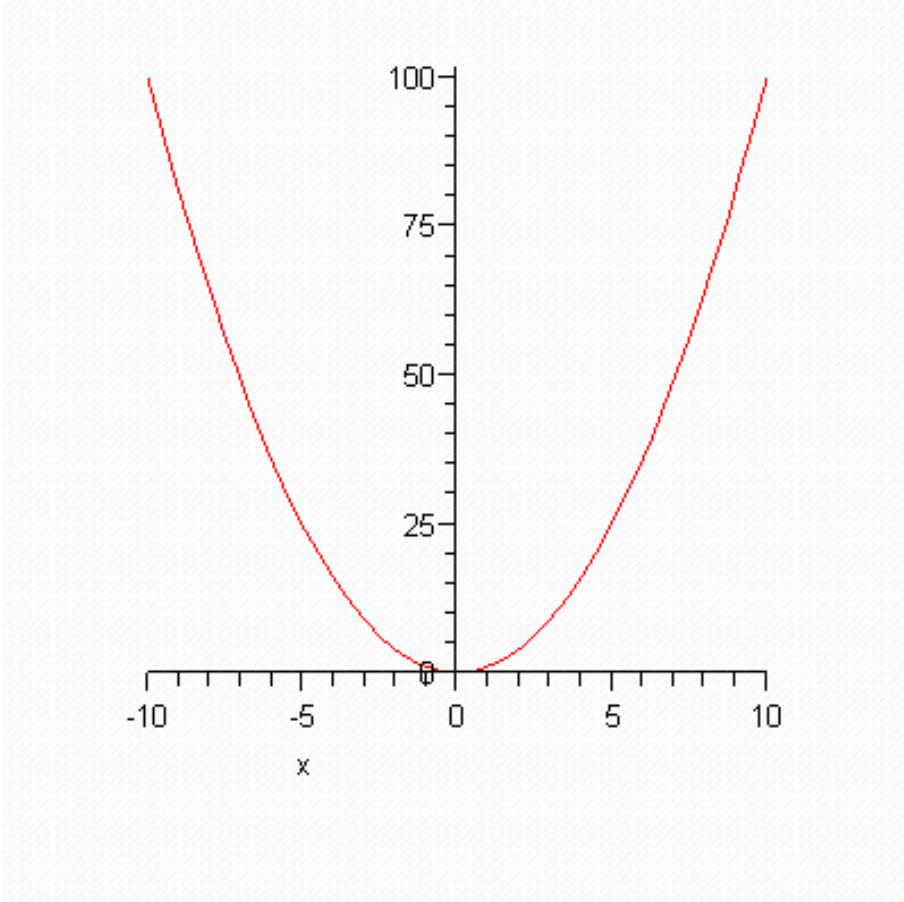
> $f(2)$

$$4$$

> $f(3.6)$

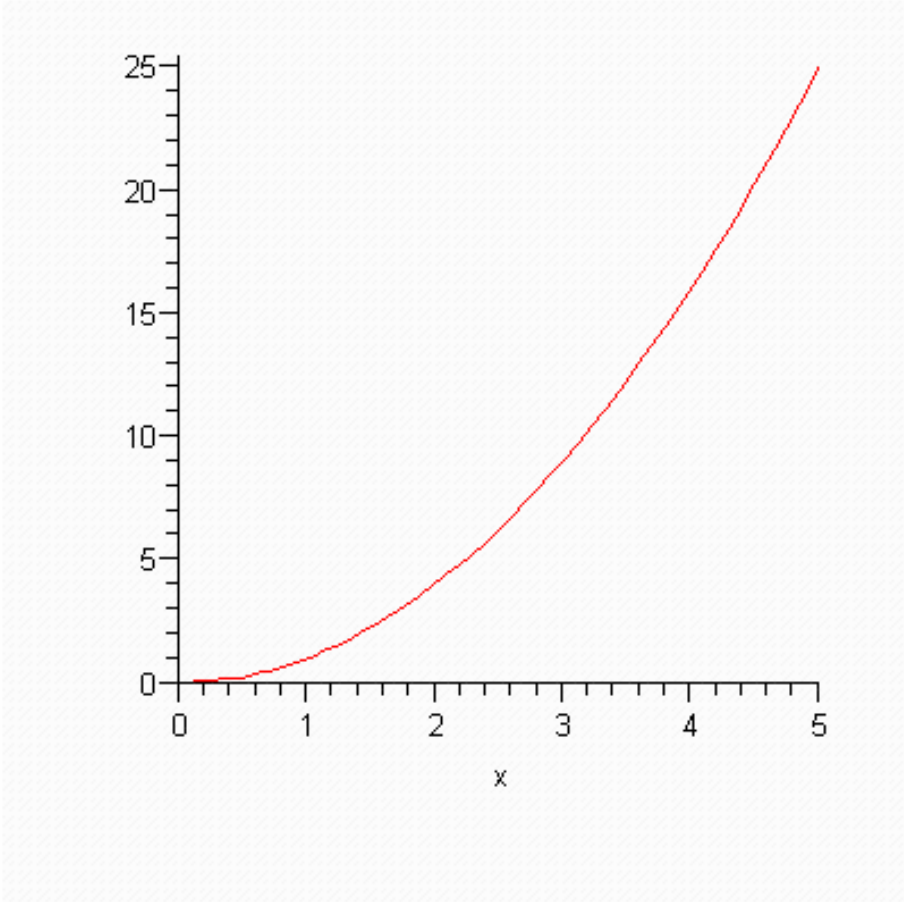
$$1$$
$$2.96$$

> $plot(f(x), x);$

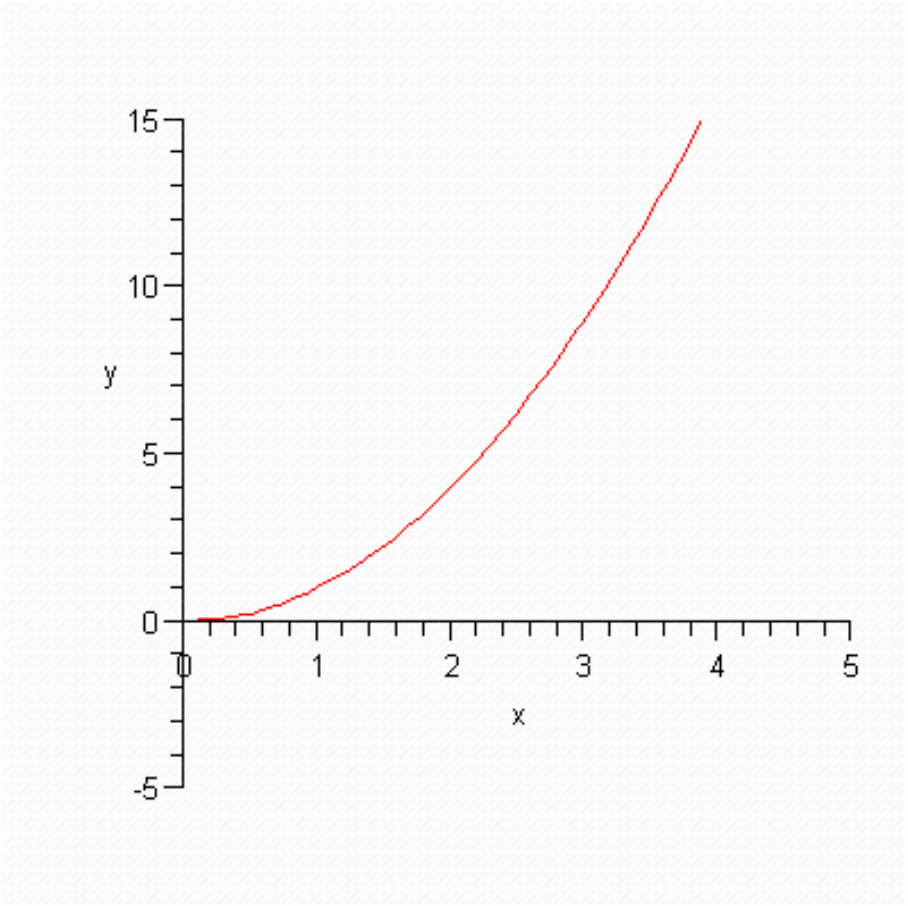


> $help(plot)$

> $plot(f(x), x = 0..5)$



> $plot(f(x), x = 0..5, y = -5..15)$



> $g := x \to x^3 - 8 \cdot x^2 + 5 \cdot x - 1$

$$g := x \to x^3 - 8\,x^2 + 5\,x - 1$$

> $g(4)$

$$-45$$

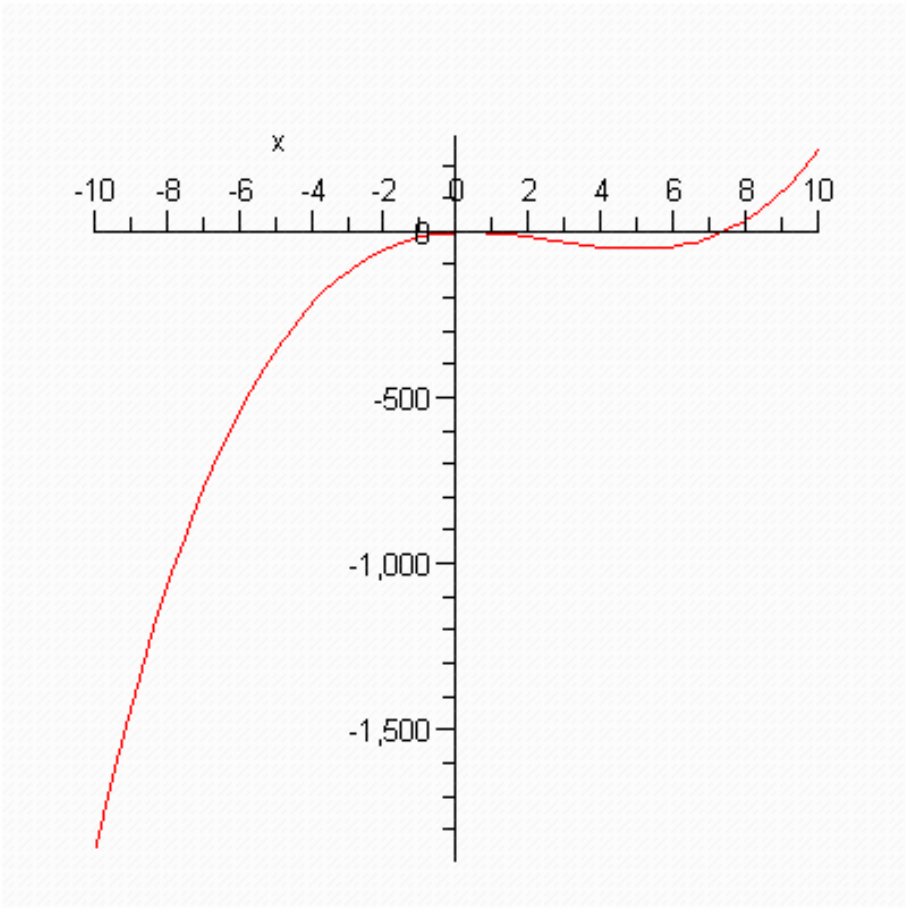
> $g(-2)$

$$-51$$

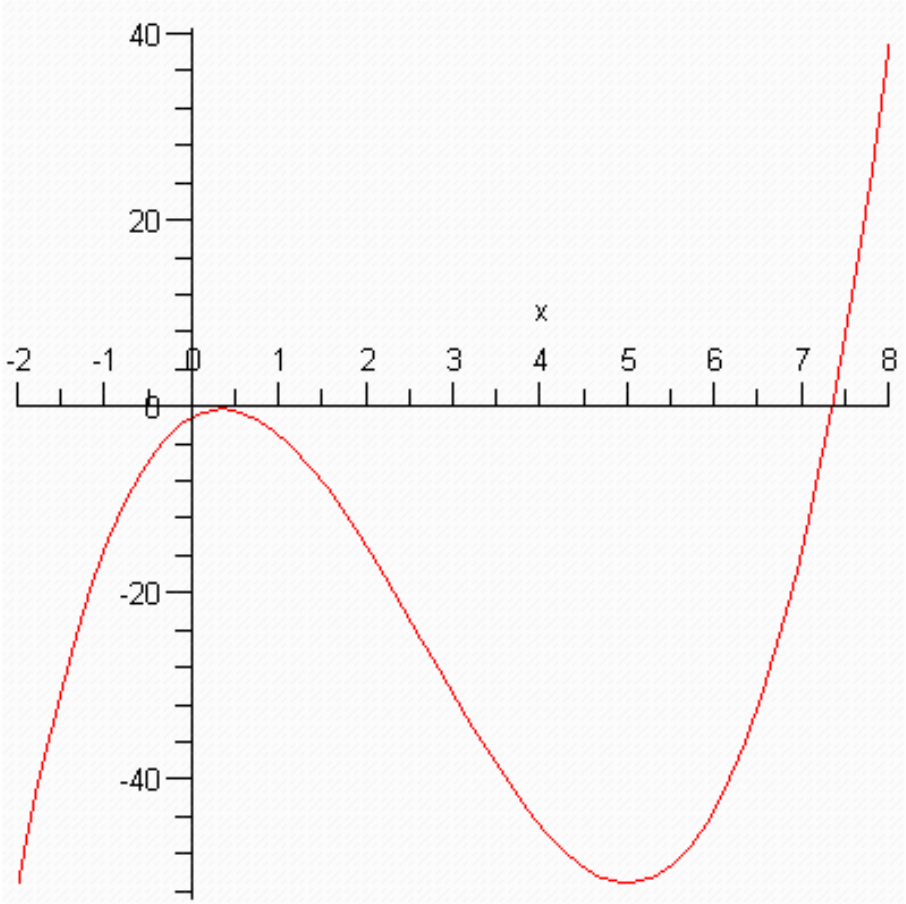
> $g(2.37)$

$$20.773147$$

> $plot(g(x), x);$



> $plot(g(x), x = -2..8)$



> $h := x \to \frac{x}{x^2 - 1}$

$$h := x \to \frac{x}{x^2 - 1}$$

> $r(x) = x^5 - 1$

$$r(x) = x^5 - 1$$

> $r(4)$

$$r(4)$$

> $r(4.0)$

$$r(4.0)$$

> $h(4)$

$$\frac{4}{15}$$

> $h(375)$

$$\frac{375}{140624}$$

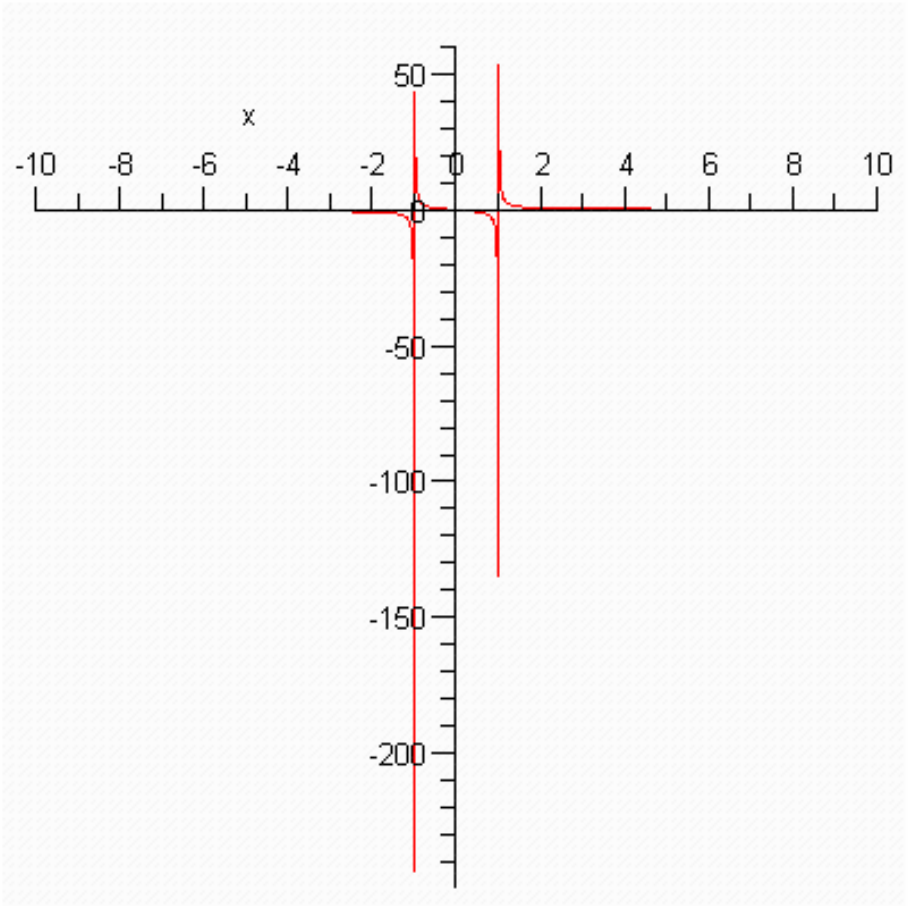
> $h(4.0)$

$$0$$
$$.2666666667$$

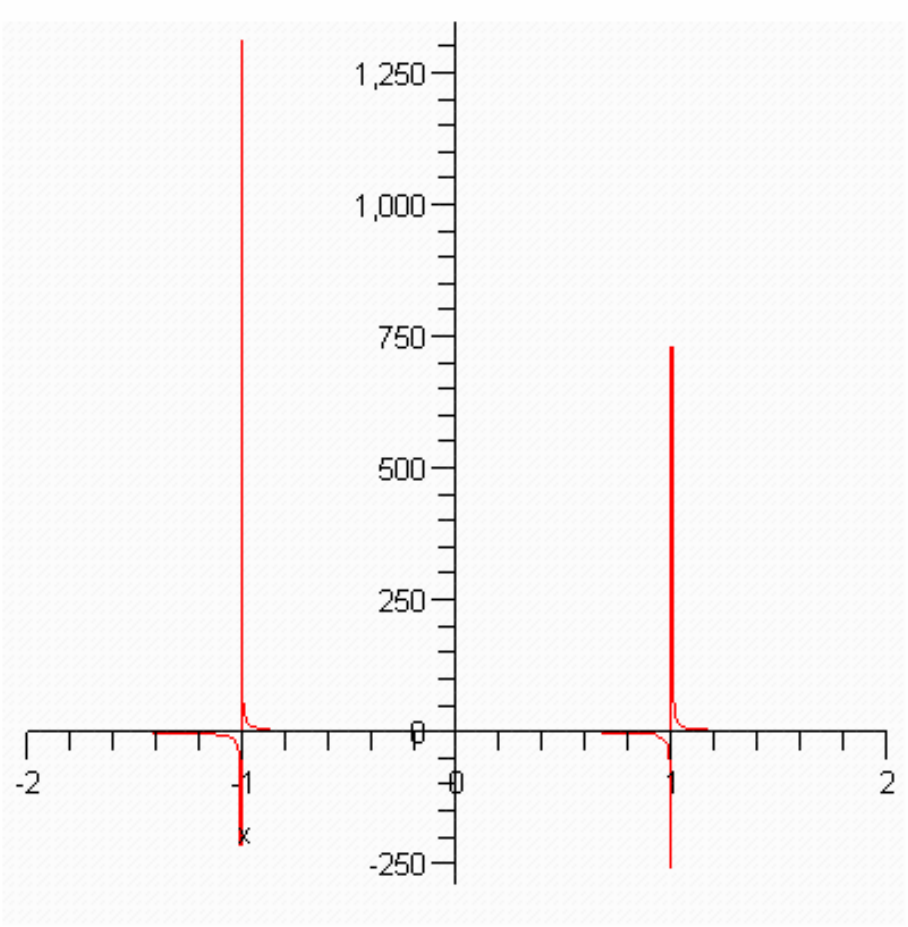
> $evalf(h(4))$

$$0$$
$$.2666666667$$

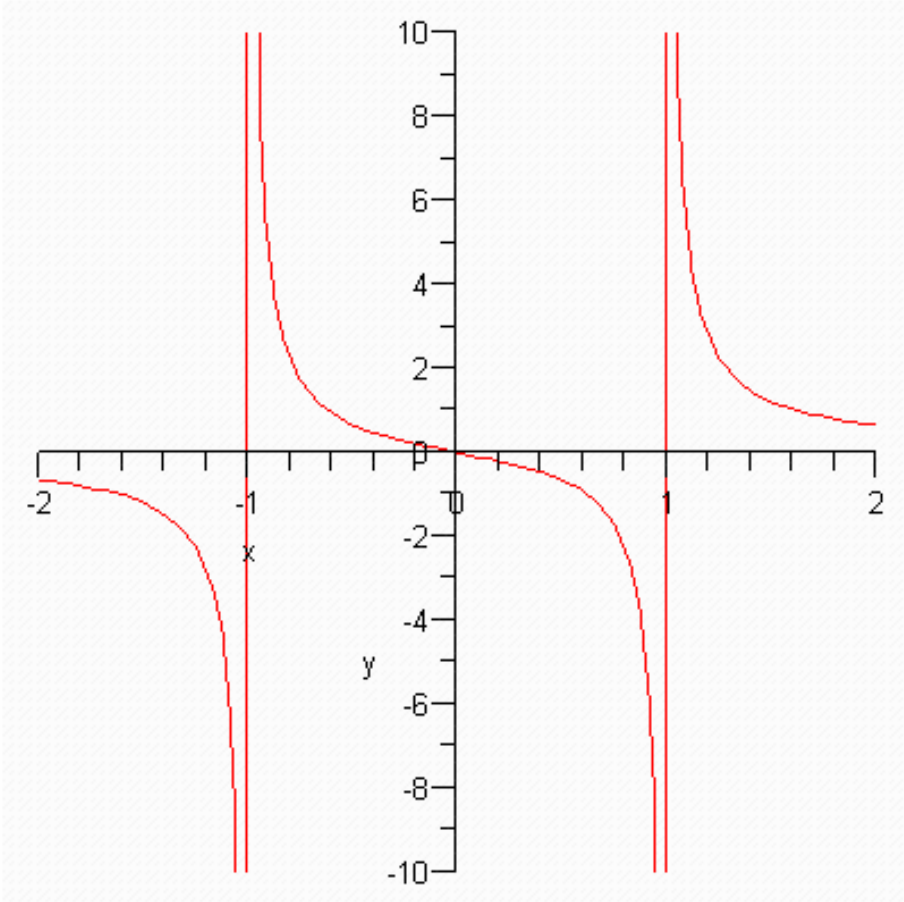
> $plot(h(x), x)$



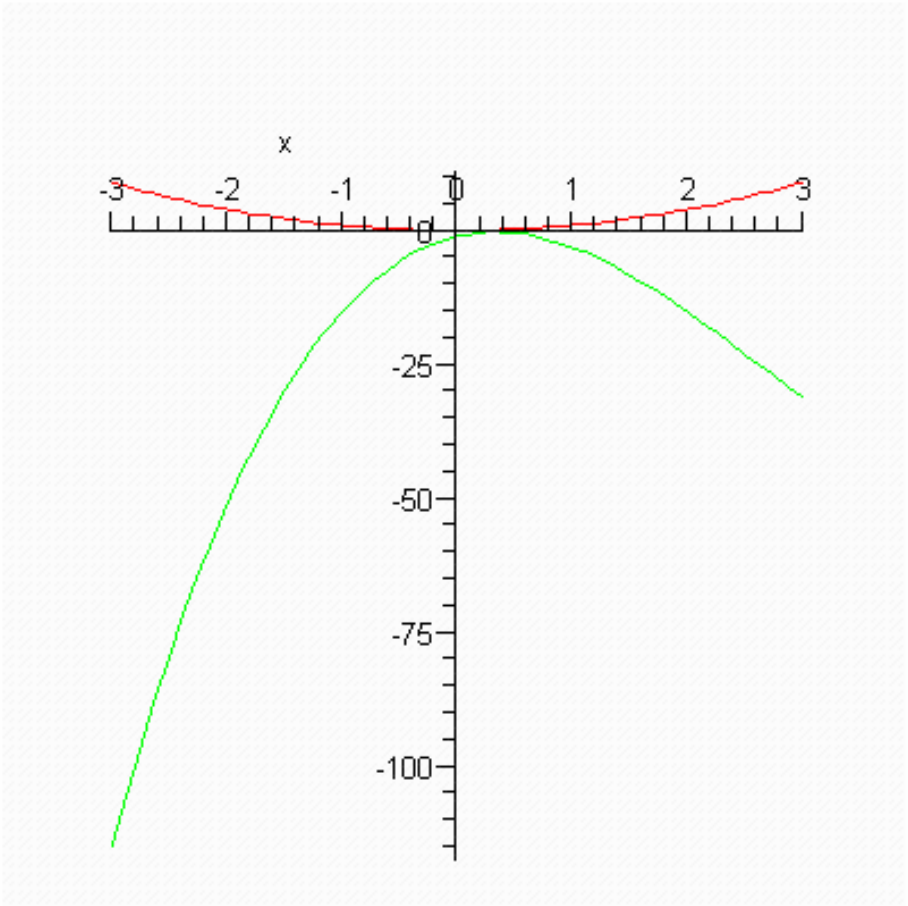
> $plot(h(x), x = -2..2)$



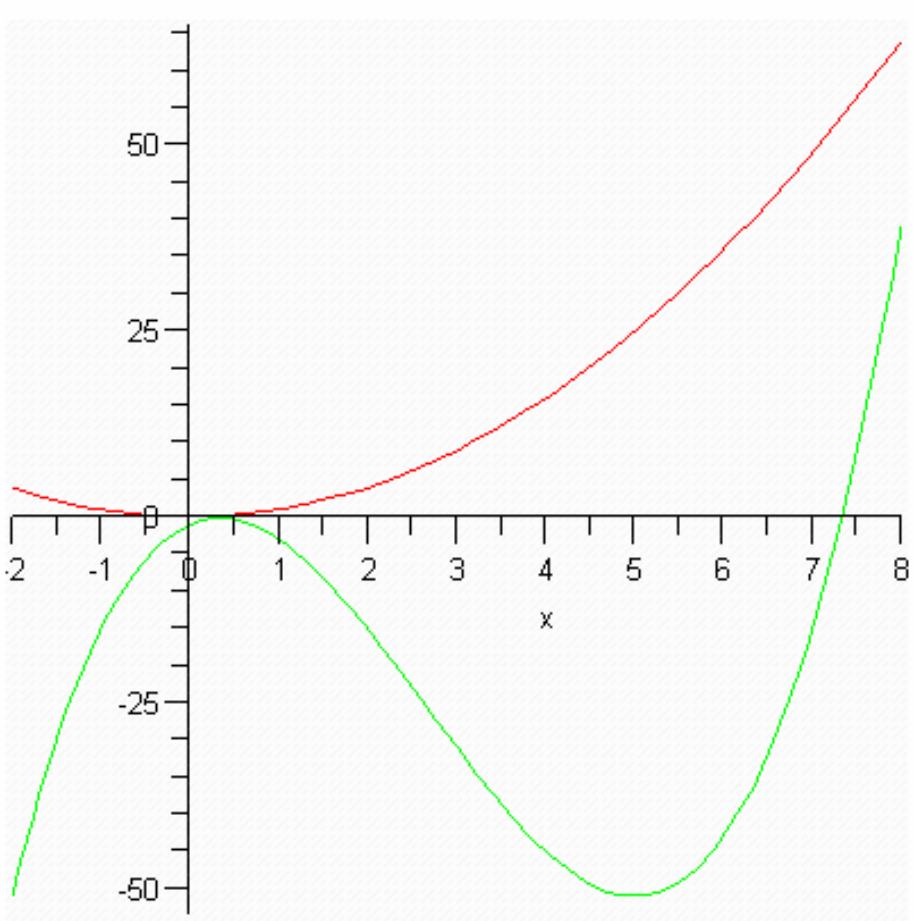
> $plot(h(x), x = -2..2, y = -10..10)$



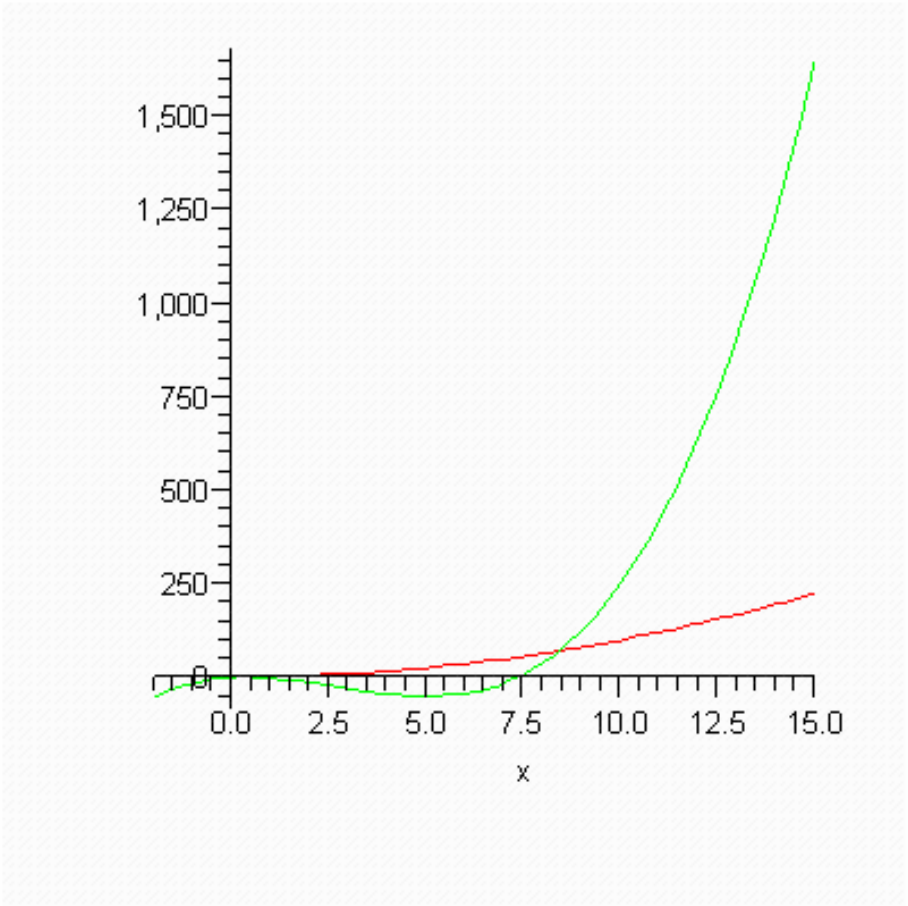
> $plot([f(x), g(x)], x = -3..3)$



> $plot([f(x), g(x)], x = -2..8)$



> $plot([f(x), g(x)], x = -2..15)$


1,500
1,250
1,000
750
500
250
0
0.0
2.5
5.0
7.5
10.0
12.5
15.0
x

>