Zadaci 2

1

(%i1) limit(x/(x^2-1),x,inf);
(%o1) 0

2

(%i2) limit(x/(x^2-1),x,1);
(%o2) *infinity*

3

(%i3) diff(x*%e^x,x);
(%o3) $x\,\%e^{x} + \%e^{x}$

4

(%i4) diff(x^n*%e^x,x,3);
(%o4) $x^{n}\,\%e^{x} + 3\,n\,x^{n-1}\,\%e^{x} + 3\,(n-1)\,n\,x^{n-2}\,\%e^{x} + (n-2)\,(n-1)\,n\,x^{n-3}\,\%e^{x}$

5

(%i5) f(x):=x^2/(x-2);
(%o5) $f(x) := \dfrac{x^2}{x-2}$

(%i6) izvod: diff(f(x),x);
(%o6) $\dfrac{2\,x}{x-2} - \dfrac{x^2}{(x-2)^2}$

(%i7) solve(izvod,x);
(%o7) $[x=0, x=4]$

(%i8) f(0);
(%o8) 0

(%i9) f(4);
(%o9) 8

(%i10) dizvod: diff(izvod,x);

$$\text{(\%o10)}\quad \frac{2\,x^2}{(x-2)^3}-\frac{4\,x}{(x-2)^2}+\frac{2}{x-2}$$
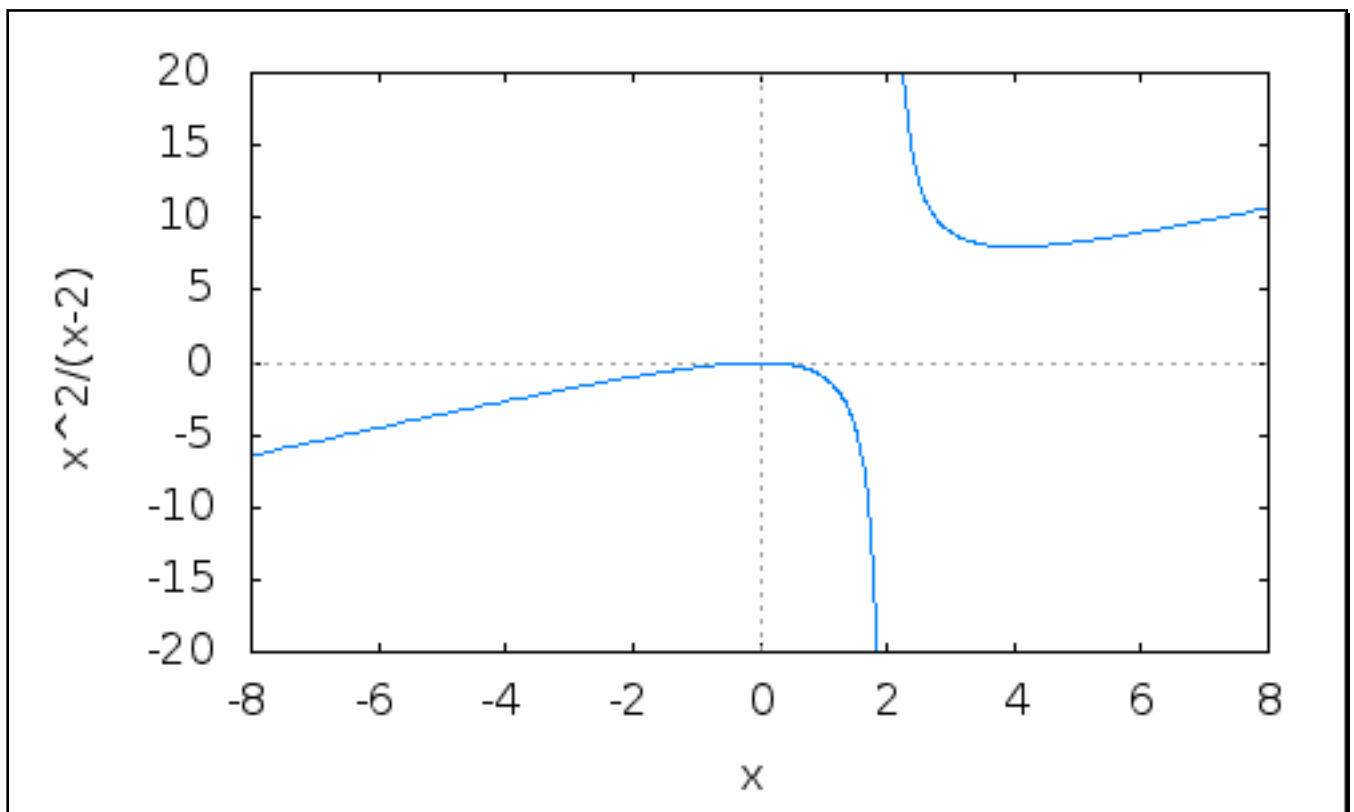
(%i11) solve(dizvod,x);

(%o11) *[ ]*

(%i12) wxplot2d(f(x),[x,-8,8],[y,-20,20]);

plot2d: expression evaluates to non-numeric value somewhere in plotting range.
plot2d: some values were clipped.

(%t12)

(%o12)