
Il teorema dei carabinieri

File scaricato da <http://www.extrabyte.info>

```
In[1]:= f[x_] := x * Cos[ $\frac{1}{\text{Log}[\text{Abs}[x]]}$ ]; g[x_] := x; h[x_] := -x
```

```
In[2]:= Limit[  
  f[x],  
  x → 0  
]
```

```
Out[2]= 0
```

```
0
```

```
In[3]:= plots = Plot[
  {
    f[x],
    g[x],
    h[x]
  },
  {x, -2, 2},
  AxesLabel ->
  {
    "x", "y"
  },
  ImageSize ->
  {
    400, 400
  },
  PlotStyle ->
  {
    Thickness[0.002],
    {
      Thickness[0.001], Red
    },
    {
      Thickness[0.001], Green
    }
  },
  TicksStyle -> Directive[
    Hue[5/6],
    11
  ],
  Epilog ->
  {
    Text["y=g(x)", {0.6, 1}],
    Text["y=f(x)", {0.6, 0.2}],
    Text["y=h(x)", {0.6, -1}],
    {
      Red, Thickness[0.004], Arrow[{{0.8, 0}, {0, 0}}]
    },
    {
      Red, Thickness[0.004], Arrow[{{0, 0.8}, {0, 0.1}}]
    }
  }
]
```

Out[3]=

