**MATEMATICA I – 2º Semestre 2017/2018**

**AULA TUTORIAL 7**

Primitive as seguintes funções nos seus domínios:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **a)** $\sqrt{x}$ |  | **b)** $\sqrt[3]{2x}$ |  | **c)** $\sqrt[5]{ax+b}$, $a,b\in R$ |
| **d)** $\sqrt{2+3x}$ |  | **e)** $\sqrt[6]{1+x}$ |  | **f)** $3x \sqrt[4]{\left(x^{2}-3\right)^{3}}$ |
| **g)** $\sqrt{x}(3x-2)$ |  | **h)** $\frac{1}{\sqrt{5x-2}}$ |  | **i)** $\frac{x}{\sqrt{9-x^{2}}}$ |
| **j)** $x^{4}\left(4-x^{5}\right)^{7}$ |  | **k)** $\frac{3x}{\left(x^{2}+3\right)^{5}}$ |  | **l)** $\frac{1}{3x-5}$ |
| **m)** $\frac{3x}{4+x^{4}}$ |  | **n)** $\frac{1}{4x^{2}+9}$ |  | **o)** $\frac{\left(1+\sqrt{x}\right)^{9}}{\sqrt{x}}$ |
| **p)** $\frac{1}{\sqrt{e^{x}}}$ |  | **q)** $\frac{e^{-\sqrt{x}}}{\sqrt{x}}$ |  | **r)** $\frac{e^{^{1}/\_{x}}}{x^{2}}$ |
| **s)** $\frac{xe^{^{x^{2}}/\_{3}}}{5}$ |  | **t)** $\frac{e^{x+2}}{\sqrt[3]{2+e^{x}}}$ |  | **u)** $\frac{ln\left(1-x\right)}{x-1}$ |
| **v)** $\frac{1}{x\sqrt{1+lnx}}$ |  | **w)** $\frac{3+4lnx}{5x}$ |  | **x)** $\frac{cosx}{\sqrt{sinx}}$ |
| **y)** $\frac{ln^{2}x}{x}$ |  | **z)** $\frac{x^{3}}{x^{4}+1}$ |  | **w)** $\frac{cos⁡(lnx)}{x}$ |
| **aa)** $tan⁡(3x)$ |  | **bb)** $\frac{sin⁡(5x)}{1+cos⁡(5x)}$ |  | **cc)** $\frac{cos⁡(5x)}{1+sin^{2}(5x)}$ |