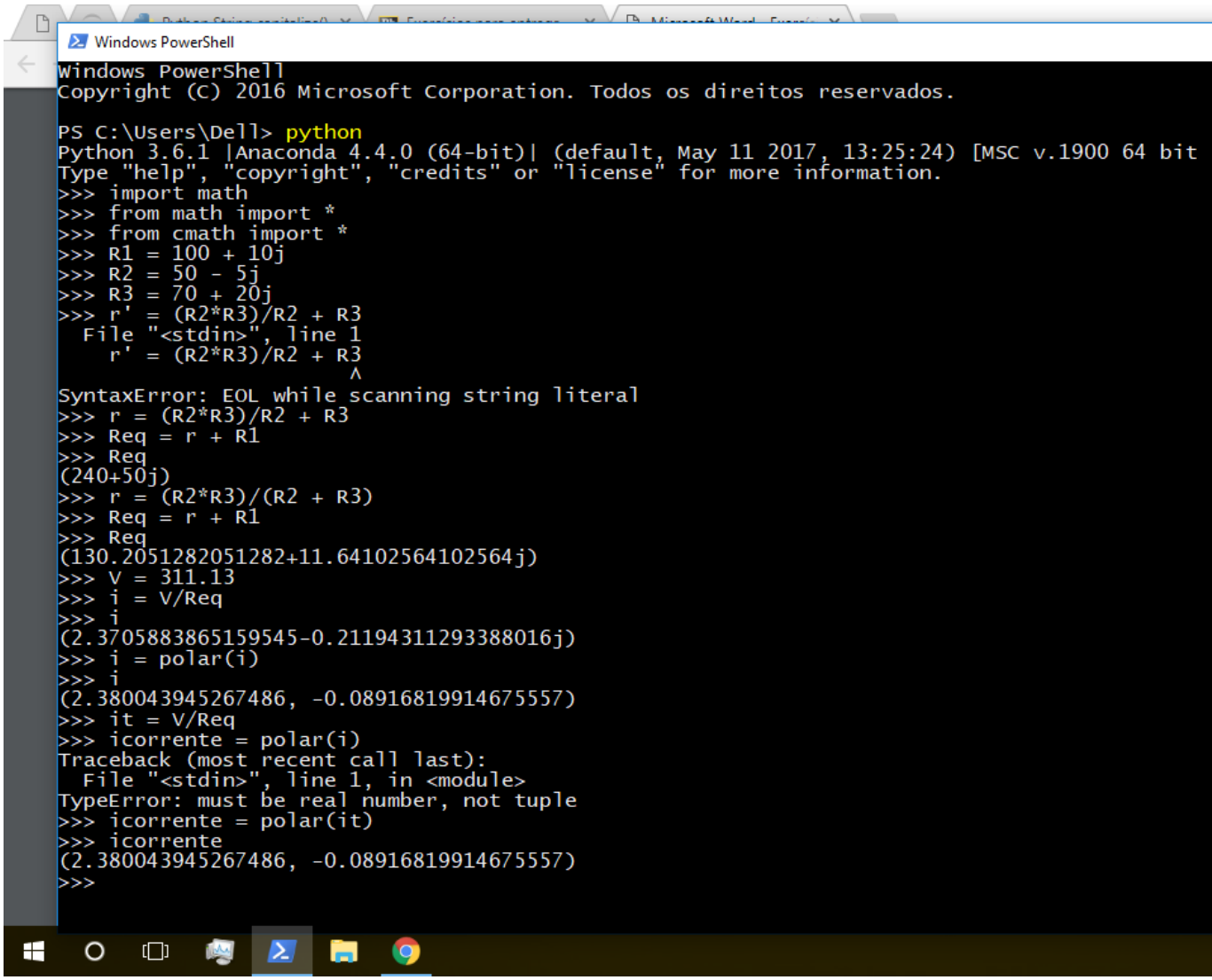
Windows PowerShell
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Copyright (C) 2016 Microsoft Corporation. Todos os direitos reservados.
PS C:\Users\Dell> python
Python 3.6.1 |Anaconda 4.4.0 (64-bit)| (default, May 11 2017, 13:25:24) [MSC v.1900 64 bit
Type "help", "copyright", "credits" or "license" for more information.
>>> import math
>>> from math import *
>>> from cmath import *
>>> R1 = 100 + 10j
>>> R2 = 50 - 5j
>>> R3 = 70 + 20j
>>> r' = (R2*R3)/R2 + R3
File "<stdin>", line 1
r' = (R2*R3)/R2 + R3
^
SyntaxError: EOL while scanning string literal
>>> r = (R2*R3)/R2 + R3
>>> Req = r + R1
>>> Req
(240+50j)
>>> r = (R2*R3)/(R2 + R3)
>>> Req = r + R1
>>> Req
(130.2051282051282+11.64102564102564j)
>>> V = 311.13
>>> i = V/Req
>>> i
(2.3705883865159545-0.21194311293388016j)
>>> i = polar(i)
>>> i
(2.380043945267486, -0.08916819914675557)
>>> it = V/Req
>>> icorrente = polar(i)
Traceback (most recent call last):
File "<stdin>", line 1, in <module>
TypeError: must be real number, not tuple
>>> icorrente = polar(it)
>>> icorrente
(2.380043945267486, -0.08916819914675557)
>>>

/ /

Vrs

1- a- frequência = $\frac{\omega}{2\pi} = 376,9911 \approx 59,9962\ Hz$

b- $P = \frac{V_{eficaz}^2}{R}$

$P = \left(\frac{311,13}{\sqrt{2}}\right)^2 \cdot \frac{1}{100}$

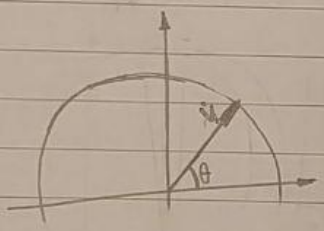
$P = 484\ W$

c-

$1\ mês \cdot 30\ dias \cdot 24\ h \cdot 600\ R\$ \cdot 484 \cdot 10^{-6}\ MW = 209,08\ R\$$

$1\ mês \quad 1\ dia \quad MW.h$

d-



$\dot{V} = 311,13(\cos 90° + j \sin 90°)$

$\dot{V} = 311,13 \angle 90°$

~ $\dot{V} = 311,13 \cdot \cos 90°$

$\dot{V} = 311,13 \angle 90°$

2- Cálculos realizados no console do python.

a- $Z_{eq} = 130.2051 + 11.6410j$

b- $\dot{I} = 2,3705 - 0,2119j$, trigonométrica

c- $i(t) = i \cdot \cos(\omega t + \theta)$

$i(t) = 2,3800 \cdot \cos(376,9911 \cdot t + 0,0891)$