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#!/usr/bin/python
__author__="morganlnance"
__question__="hw1_q8"


from math import log


def dielectric( T ):
    """
    Calculate the dielectric constant using the empirical formula and
a temperature
    :param T: float( temperature )
    :return float
    """
    e = 87.740 - ( 0.40008*T ) + ( 0.0009398 * (T**2) ) -
( 0.000001410 * (T**3) )

    return e


# T 0 through 100 Celsius
x_val = range( 101 )

# T 0 through 100
y_val = [ dielectric( T ) for T in x_val ]
```