“Homework 5” Justin Minsk

1. Your friend is right since

True != True = False

False != True = True

False != False = False

True != False = True

def different(num):

""" (number) -> bool

Return results as true if num is equal to abs(num).

>>> different(-1)

False

>>> different(1)

True

"""

if num == abs(num):

result = True

else:

result = False

return result

3.

def convert\_temperatures(t, source, target):

"""(number, String, String) -> float

Take a temp. in one format and change it to a different format,

allows Kelvin, Celsius, Fahrenheit, Rankine, Delisle, Newton, Reaumur,

and Romer.

>>>convert\_temperatures(25, 'Rankine', 'Romer')

25 Rankine is now -128.61208333333335 Romer.

>>>convert\_temperatures(25, 'Celsius', 'Romer')

25 Celsius is now 20.625 Romer.

>>>convert\_temperatures(20.625, 'Romer', 'Celsius')

20.625 Romer is now 25.0 Celsius.

"""

n = True

told = t

if source == 'Kelvin':

t = t - 273.15

elif source == 'Fahrenheit':

t = (t - 32) \* (5 / 9)

elif source == 'Rankine':

t = (t - 491.67) \* 5 / 9

elif source == 'Delisle':

t = 100 - t \*2/3

elif source == 'Newton':

t = t \* 100 / 33

elif source == 'Reaumur':

t = t \* 5 / 4

elif source == 'Romer':

t = (t - 7.5) \* 40 / 21

elif source == 'Celsius':

t = t

else:

print('Invaild source')

n = False

if target == 'Kelvin':

t = t + 273.15

elif target == 'Fahrenheit':

t = t \* 9 / 5 + 32

elif target == 'Rankine':

t = (t + 273.15) \* 9 / 5

elif target == 'Delisle':

t = (100 - t) \* 3 / 2

elif target == 'Newton':

t = t \* 33 / 100

elif target == 'Reaumur':

t = t \* 4 / 5

elif target == 'Romer':

t = t \* 21 / 40 + 7.5

elif target == 'Celsius':

t = t

else:

print('Invaild target')

n = False

if n == True:

print(told, source, "is now", t, target + ".")

else:

print('Invaild entries use captial letters for the begining of the sources')

b. two more statements

1. You could change it to

if 7.0 > ph > 3.0:

print(ph, 'is acidic.')

elif ph < 3.0:

print(ph, 'is very acidic! Be careful.')