• What is the output of the following program:

```python
x = 1; y = 2
def f(a, b):
    return a * b
end
```

What will `f(x, x)` return?

• Fill in the body of the `conv` function that converts temperatures from Fahrenheit to Celsius. Make sure that the input temperature is valid, i.e., it is not less than -459.76°F Fahrenheit. Temperatures in Fahrenheit (\( T_f \)) and Celsius (\( T_c \)) are related according to this formula:

\[
T_c = \frac{5}{9} \times (T_f - 32)
\]

```python
def conv(f):
    # ensure that f is valid; return "nil" if f is invalid

    # calculate and return celsius

end
```

• Function `mid` takes three numbers as parameters, and returns the one that is in the middle of the other two. For example: `mid(1, 3, 2)` returns 2, `mid(10, 1, 10)` returns 10. Implement `mid`. 