Celsius to Fahrenheit formula: C*(9/5)+32=F

Registers:
R0-R3 pass parameters or pointers to procedure
R0 used to pass back parameter to calling program
R4-R10 must be saved by procedure
R13 stack pointer
R14 link register

Second program objective: Using the first program incorporate a procedure that will calculate Fahrenheit values and store them in an array called FahrenheitTemps and also returns the average to the mainline which stores the value to Fahrenheit_Av

Algorithm:

Initialize a counter to 16 for the amount of temperature values
Initialize a pointer to temperature values(Celsius_Temps)
If counter not equal to 0 repeat
    Load value from Celsius_Temps and increment pointer
    Add values to perform an average calculation
    Decrement counter
End repeat
Right shift by 4 to divide by 16
Store value into Celsius_Av
End program

Algorithm 2 (takes place after first program):

Initialize a counter to 16
Initialize a pointer to FahrenheitTemps array
Call procedure Fahrenheit (pass counter and pointers)
    If counter not equal to 0 repeat
        Multiply by 9
        Divide by 5
        Add 32
        Store value into array FahrenheitTemp
        Add values to perform average calculation
        Decrement counter
    End repeat
    Right shift average value to divide by 16
    Return average to mainline
Store average into Fahrenheit_Av
End program