Problem 1: Milk cartons

Step 1: Start
Step 2: Declare double variables cart_length, cart_height, volume_inch_cubed
Step 3: Ask user for cart_length
Step 4: Ask user for cart_height
Step 5: volume_inch_cubed = cart_length * cart_length * cart_height
Step 6: display("The carton has a volume of " + (volume_in_cubed * .55) + "ounces")
Step 7: Stop

Problem 2: Skiing trip

Step 1: Start
Step 2: Declare integer variables days, breckenridge, copper, vail
Step 3: Ask user for how many days in the future they want for a snow prediction
Step 4: breckenridge = days * 10 / 5
Step 5: If breckenridge < 0
    a. Return 0
Step 6: copper = days * 5 / 3
Step 7: If copper < 0
    a. Return 0
Step 8: vail = days * 14 / 2
Step 9: If vail < 0
    a. Return 0
Step 10: Display("vail: " + vail + "copper: " + copper + "breckenridge: " + breckenridge)
Step 11: end

Problem 3a: Job at Zillow

Step 1: start
Step 2: Declare variables user_sqft, user_pets, user_rent
Step 3: Ask user for desired square footage, pets, and rent
Step 4: If user_sqft equals anything but a positive integer
    a. User_sqft = 0
    b. Return 0
Step 5: If user_pets eaquals anything but true or false
    a. User_pets = false
    b. Return 0
Step 6: If user_rent equals anything but a positive integer
    a. User_rent = 0
    b. Return 0
Step 7: If user_sqft is greater than or equal to 600
    a. If user_input is greater than or equal to 800
        i. If user_input is greater than or equal to 1000
            a. If user_rent is greater than or equal to 1800
                i. Display("We recommend apartment C!")
                ii. Return 0
            b. Else

i. Display("No matches, sorry!")
ii. Return 0

ii. If user_pets = false
a. If user_rent is greater than or equal to 1600
i. Display("We recommend apartment B!")
ii. Return 0
b. Else
i. Display("No matches, sorry!")
ii. Return 0

iii. Else
1. display("No matches, sorry!")
2. return 0

b. If user_rent is greater than or equal to 1200
i. Display("We recommend apartment A!")
ii. Return 0

c. Else
i. Display("No matches, sorry!")
ii. Return 0

Step 8: End

Problem 3b: Job testing

Scenario 1: 1540 sfqt, pets, $2000
Output: We recommend apartment C!
Scenario 2: 800 sfqt, pets, $1800
Output: No matches, sorry!
Scenario 3: 660 sfqt, no pets, $1600
Output: We recommend apartment A!
Scenario 4: "faeng" sfqt, no pets, $1000
Output: No matches, sorry!

Problem 4a: cryptocurrency

Step 1: Start
Step 2: Declare annual_rate, initial_investment, daily_loss, days, months, years
Step 3: Annual_rate = .65
Step 4: Initial_investment = 15000
Step 5: Daily_loss = initial_investment * annual_rate/365
Step 6: While initial_investment > initial_investment/2
a. Initial_investment = initial_investment * daily_loss
b. Days += 1
c. If days = 30
i. Months += 1
ii. Days = 0
iii. Initial_investment – 100
d. If months = 12
i. Months = 0

ii. Years += 1

Step 7: Display(years + " years, " + months " months, and " + days + " days.")

Step 8: end

Problem 4a: cryptocurrency with input

Step 1: Start

Step 2: Declare annual_rate, initial_investment, daily_loss, days, months, years

Step 3: Ask user for annual_rate, initial_investment, and monthly_withdrawl

Step 4: Annual_rate = annual_rate * .01

Step 5: Daily_loss = initial_investment * annual_rate/365

Step 6: While (initial_investment > initial_investment/2)

a. Initial_investment = initial_investment * daily_loss
b. Days += 1
c. If days = 30
    i. Months += 1
    ii. Days = 0
    iii. Initial_investment – monthly_withdrawl
d. If months = 12
    i. Months = 0
    ii. Years += 1

Step 7: Display(years + " years, " + months " months, and " + days + " days.")

Step 8: end

Problem 5: Code error

Compile time errors:
"enl" is an undefined statement in C++. Fix it by using "endl"
There is no semicolon at the end of line 5. Fix it by using a semicolon at the end.

The runtime error is that it prints "Hello 1300" and not "Hello 1300!". We can fix this by just adding an "!" to the end of our original print statement.