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1.a)

run:

Printing values

int item1 value = 5

int item2 value = 6

double num1 value = 3.0

double num2 value = 24.0

orig item2/item1 6/5 = item2 = 1

resetting item2 value = 15

item2/num1 15/3.0 = num2 = 5.0

item1\* num1/2 8\*3.0/2 = num2 = 12.0

int item2 value = 15

double num1 value = 3.0

after item2=(item2-1) / 3: item2 value = 4

after num1 \*= item2+2.1: num1 value = 18.299999999999997

num1 < item1 is false

num2 != item2 is true

Printing values

int item1 value = 8

int item2 value = 4

double num1 value = 18.299999999999997

double num2 value = 12.0

BUILD SUCCESSFUL (total time: 0 seconds)

1.b)

num1 = num1 \* (item2 + 2.1);

1.c)

Modulus. %: this operator computes the remainder of an integer division.

Increment the ++ operator adds 1 to a variable.

Decrement the -- operator subtracts 1 from a variable.

2.a) java file

2.b)

run:

Please enter a 4-digit course number of 1310 or 1320: 1310

Please enter the current semester (Fall, Spring, or Summer): Spring

The course is Spring 2017, CSE1310-005

run:

Please enter a 4-digit course number of 1310 or 1320: 1320

Please enter the current semester (Fall, Spring, or Summer): Fall

The course is Fall 2017, CSE1320-005

2.c)

The type of the variables *dash* and *comma* is char ( character), which is representing code units in the Unicode encoding scheme this symbol is single quote like this: ' '

While the symbol of the String is double quotes like this: " "

A String could be one or more characters, while a character is merely one character.

2.d)

Java file

3.a)

1) incompatible types: possible lossy conversion from double to int

2) incompatible types: possible lossy conversion from double to int

3) illegal start of expression

4) cannot find symbol

symble: variable circumference

location: class Lab2Part3

illegal start of expression

5) cannot find symbol

symble: variable circumference

location: class Lab2Part3

3.b)

Error: incompatible types: possible lossy conversion from double to int

Explanation: The first error is because base is integer while x1 and x2 are double; we cannot assign a double-precision value to an integer type variable.

Error: incompatible types: possible lossy conversion from double to int

Explanation: The second error is same as the first error, the height is integer while y1 and y2 are double; we cannot assign a double-precision value to an integer type variable.

Error: illegal start of expression

Explanation: The third error because the programmer did not assign any value to the variable (which is: area).

Error: cannot find symbol

symble: variable circumference

location: class Lab2Part3

illegal start of expression

Explanation: The fourth error is because the programmer did not declare the variable (circumference). Also, the programmer did not assign a value to that variable.

Error: cannot find symbol

symble: variable circumference

location: class Lab2Part3

Explanation: The fifth error is the same as the fourth error, the variable circumference was neither declared nor initialized.

3.c)

Java file

3.d)

run:

The base is length 3 and the height is -4

The distance between (4.0,1.0) and(1, 5) is 5.0

The area of the right triangle is -6.0The circumference of the right triangle is 4.0BUILD SUCCESSFUL (total time: 0 seconds)

4) java file

5.a) java file

5.b)

The set of value that the user entered (H: 7 W: 2.5 D: 1.4 weight: 5)

run:

please enter a floating point number for the height of the box in feet: 7

please enter a floating point number for the width of the box in feet: 2.5

please enter a floating point number for the depth of the box in feet: 1.4

please enter a floating point number for the weight of the box in Kilograms: 5

Unit Height Width Depth Volume

Inches 84.0 30.0 16.8 42336.0

Feet 7.00 2.50 1.40 24.50

Weight in Pounds Kilograms Kg per In

11.0000 5.0000 0.0001

The set of value that the user entered (H: 9 W: 12 D: 5.4 weight: 56)

run:

please enter a floating point number for the height of the box in feet: 9

please enter a floating point number for the width of the box in feet: 12

please enter a floating point number for the depth of the box in feet: 5.4

please enter a floating point number for the weight of the box in Kilograms: 56

Unit Height Width Depth Volume

Inches 108.0 144.0 64.8 1007769.6

Feet 9.00 12.00 5.40 583.20

Weight in Pounds Kilograms Kg per In

123.2000 56.0000 0.0001