

Revision Sheet #9

1) Convert the following number bases:

- a) 45 base 10 into binary
- b) 01101100 base 2 into base 16
- c) 11000011 base 2 into base 10
- d) #36 base 16 into base 10
- e) #FA base 16 into base 2

2) There are missing parameters to the function on line 1, what should be in place for ****A**** and ****B****?

3) What is a syntax error?

4) What line is the syntax error on in the function?

5) What is a logic error?

6) What is the logic error in the code?

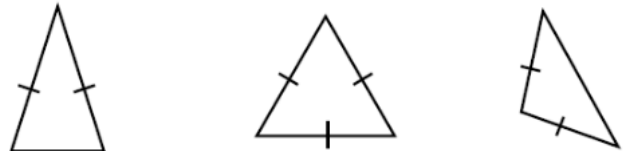
7) There is a syntax error on lines 11 and 12. What is it?

8) Given the ProCode rules, how would you improve this code?

- PC1: Sprites, variables and sub-routines should be named appropriately
- PC2: Convert all repeated lines of code to a loop
- PC3: Convert all repeated functionality to sub-routines

```
1 def getNumber(message, **A**, **B**):
2     while True:
3         try:
4             val = int(input("message"))
5             if (val > minVal) or (val < maxVal):
6                 raise Exception
7             return val
8         except:
9             print("Invalid entry")
10
11 x = getNumber("What is your age?")
12 y = getNumber("What id your friends age?")
13
14 name1 = input("What is your name?")
15 name2 =input("What is your friends name?")
16
17 if x > y:
18     print("You are older than", name2)
19 elif y > x:
20     print("Your friend is older")
21 else:
22     print("You are same age")
```

9) An isosceles triangle is a triangle that has at least x2 equal sides. The diagram shows examples. In each diagram that marked sides are equal. Write an algorithm that determines whether a triangle is an isosceles triangle.



- The user inputs the lengths of the x3 sides as length1, length2 and length3
- If any x2 sides have the same length the program outputs "Isosceles"
- Otherwise the program outputs "Not isosceles"

10) Write some pseudocode that asks the user to enter the radius of a circle then outputs the circumference. Circumference is calculated by multiplying the diameter by 3.14

11) Re-write this code to use iteration:

```
DiceRoll(1) = Random Number 1-6
DiceRoll(2) = Random Number 1-6
DiceRoll(3) = Random Number 1-6
DISPLAY DiceRoll(1)
DISPLAY DiceRoll(2)
DISPLAY DiceRoll(3)
```