# Worksheet 10a Programming Techniques Answers

1. **Using a flag**

(a) Complete this program. It should ask three questions and at the end should display whether the user got all 3 questions correct.  
  
correct = True  
answer = int(input(“What is 12 x 3? ”))  
if answer != 36:  
 correct = False  
  
answer = int(input(“What is 6 x 7? ”))  
if answer != 42:  
 correct = False  
answer = int(input(“What is 7 x 9? ”))  
if answer != 63:  
 correct = False  
if correct == True:  
 print(“Well done, you got them all right!”)  
else:  
 print(“Good try, but you didn’t get them all”)

(b) Rewrite your solution for Question 1 so that the program displays whether the user got all of the answers wrong.

correct = False  
answer = int(input(“What is 12 x 3? ”))  
if answer == 36:  
 correct = True

answer = int(input(“What is 6 x 7? ”))  
if answer == 42:  
 correct = True  
  
answer = int(input(“What is 7 x 9? ”))  
if answer == 63:  
 correct = True

if correct == False:  
 print(“Oh dear – you got every one of those wrong!!”)  
else:  
 print(“Well, you definitely got at least one right.”)

1. **Using a flag inside a loop**

Rewrite the following program so that it uses a flag to inform the user whether or not there is a multiple of 3 in the list provided.

list = [13,14,29,47]  
for i in range(len(list):  
 if list[i]%3 == 0:  
 print(“Found a multiple of 3”)  
  
found = False  
list = [13,14,29,47]  
for i in range(len(list):  
 if list[i]%3 == 0:  
 found = True

if found == True:

print(“Found a multiple of 3”)

else:  
 print(“Did not find a multiple of 3”)

1. **Obscure animals**

Complete this program. The user needs to enter the names of 5 animals. If one of those animals is in the list then they lose, otherwise they win the game. Use a flag to record their success and print an appropriate comment.  
  
animals = [“dog”, “cat”, “giraffe”, “gerbil”, “hamster”, “rabbit”, “horse”]  
match = False  
for i in range(5):  
 guess = input(“Enter the name of an animal: ”)  
 if guess in animals:  
 match = True  
  
if match == False:  
 print(“Well done, you win!”)  
else:  
 print(“Sorry, one of those animals was in our list!”)