

University of Colombo School of Computing

SCS 2204

Functional Programming

Tutorial 3

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Question 1

```
def area(r:Double):Double = Pi*r.toDouble*r.toDouble
// call the function with r = 55
printf("Area of a disk with radius 5 : %.2f\n", area(5))
```

Question 2

```
def tofahrenheit(c:Double):Double = c*1.80 + 32.00
// call the function with c = 35
printf("Fahrenheit value of 35 Celsius is : %.2f\n", tofahrenheit(35))
```

Question 3

```
def volume(r:Double):Double = 4.toDouble/3.toDouble*Pi*r*r*r
// call the function with r = 5
printf("volume of a sphere with radius 5 : %.2f\n", volume(5))
```

Question 4

```
def covercost(copy:Int):Double = copy.toDouble*24.95
def discount(price:Double):Double = price*.4
def shippingcost(copy:Int):Double = if(copy>50) (3 + (copy-50)*.75).toDouble else 3.toDouble
def wholesalecost(copy:Int):Double = covercost(copy) - discount(covercost(copy)) + shippingcost(copy)
// call the function with copy = 60
printf("Total wholesale cost for 60 copies : %.2f\n",wholesalecost(60))
```

Quesiton 5

```
def easy(x:Int):Int = x*8
def temp(x:Int):Int = x*7
// call necessary combinations of functions.
printf("Total running time : %d\n",easy(2)+temp(3)+easy(2))
```