Session 2 Solutions

Exercise 2.2

```
friends = int(input('How many friends are at your house? '))
pizzas = friends * 0.5

print('You need {} pizzas for {} friends'.format(pizzas, friends))
```

Exercise 2.3

```
import turtle

side_length = 100
angle = 120

turtle.forward(side_length)
turtle.right(angle)

turtle.forward(side_length)
turtle.right(angle)

turtle.forward(side_length)
turtle.right(angle)

turtle.done()
```

Extension Solution

```
import turtle

side_length = 100
angle = 120

turtle.color('blue', 'blue')
turtle.begin_fill()
```

```
turtle.forward(side_length)
turtle.right(angle)

turtle.forward(side_length)
turtle.right(angle)

turtle.forward(side_length)
turtle.right(angle)


turtle.end_fill()

turtle.done()
```

Exercise 2.4

```
import turtle

sides = int(input('Number of sides: '))

angle = 360 / sides
side_length = 60

for side in range(sides):
    turtle.forward(side_length)
    turtle.right(angle)

turtle.done()
```

Exercise 2.5

```
import turtle


def triangle():
    side_length = 100
    angle = 120
```

```
    for side in range(3):
        turtle.forward(side_length)
        turtle.right(angle)


triangle()
```

Exercise 2.6

```
import turtle


def triangle(side_length):
    angle = 120

    for side in range(3):
        turtle.forward(side_length)
        turtle.right(angle)


triangle(400)
triangle(300)
triangle(200)
triangle(100)
```

Extension:

```
import turtle


def triangle(side_length, colour):
    angle = 120

    turtle.color(colour, colour)
    turtle.begin_fill()

    for side in range(3):
        turtle.forward(side_length)
        turtle.right(angle)
```

```
    turtle.end_fill()


triangle(400, 'red')
triangle(300, 'pink')
triangle(200, 'blue')
triangle(100, 'yellow')
```

Exercise 2.7

```
def circle_area(radius):
    area = 3.14 * (radius ** 2)
    return area

area = circle_area(9)

print(area)
```