

```
1.import turtle
t = turtle.Turtle()
for _ in range(5):
    t.forward(100)
    t.right(144)
turtle.done()
```

```
2.import turtle
for _ in range(5):
    turtle.forward(100)
    turtle.right(72)
turtle.done()
```

```
3.import turtle
turtle.Turtle().circle(100)
turtle.done()
```

```
4.import tkinter as tk
def f_to_c():
    c_entry.delete(0, tk.END)
    c_entry.insert(0, (float(f_entry.get()) - 32) * 5 / 9)
def c_to_f():
    f_entry.delete(0, tk.END)
    f_entry.insert(0, float(c_entry.get()) * 9 / 5 + 32)
root = tk.Tk()
tk.Label(root, text="Fahrenheit").grid(row=0, column=0)
tk.Label(root, text="Celsius").grid(row=0, column=1)
```

```
f_entry = tk.Entry(root)
c_entry = tk.Entry(root)
f_entry.grid(row=1, column=0)
c_entry.grid(row=1, column=1)
```

```
f_entry.insert(0, "32")
c_entry.insert(0, "0.0")
```

```
tk.Button(root, text=">>>>", command=f_to_c).grid(row=2, column=0)
tk.Button(root, text="<<<<", command=c_to_f).grid(row=2, column=1)
```

```
root.mainloop()
```

```
5.import turtle
```

```
for _ in range(10):
    for _ in range(6):
        turtle.forward(50)
        turtle.right(60)
    turtle.right(36)
```

```
turtle.done()
```

```
6.import tkinter as tk
def to_upper():
    out.delete(0, tk.END)
    out.insert(0, inp.get().upper())
inp = tk.Entry()
inp.pack()
out = tk.Entry()
out.pack()
tk.utton(text="Convert", command=to_upper).pack()
tk.mainloop()
```

```
7.import tkinter as tk
from tkinter import messagebox
from math import sqrt
```

```
def compute():
    try:
        out.delete(0, tk.END)
        out.insert(0, sqrt(int(inp.get())))
    except:
        messagebox.showerror("Error", "Invalid input")
inp = tk.Entry()
inp.pack()
out = tk.Entry()
out.pack()
tk.Button(text="Compute", command=compute).pack()
tk.mainloop()
```

```
8.import tkinter as tk
import random
n = random.randint(1, 100)
count = 0
def guess():
    global count
    try:
        g = int(entry.get())
        count += 1
        if g < n:
            label.config(text="Too small, try again")
        elif g > n:
            label.config(text="Too large, try again")
        else:
            label.config(text=f"Correct! Guesses: {count}")
    except:
        label.config(text="Enter a number")
```

```
entry = tk.Entry()
entry.pack()
tk.Button(text="Guess", command=guess).pack()
label = tk.Label()
label.pack()
tk.mainloop()
```

```
9.import tkinter as tk
```

```
low, high = 1, 100
```

```
def guess():
    global mid
    mid = (low + high) // 2
    label.config(text=f"My guess: {mid}")
```

```
def smaller():
    global high
    high = mid - 1
    guess()
```

```
def larger():
    global low
    low = mid + 1
    guess()
```

```
def correct():
    label.config(text=f"Guessed it: {mid}")
    b1.config(state="disabled")
    b2.config(state="disabled")
    b3.config(state="disabled")
```

```
def new():
    global low, high
    low, high = 1, 100
    b1.config(state="normal")
    b2.config(state="normal")
    b3.config(state="normal")
    guess()
```

```
label = tk.Label()
label.pack()
```

```
b1 = tk.Button(text="Too small", command=larger)
b1.pack()
```

```
b2 = tk.Button(text="Too large", command=smaller)
```

```

b2.pack()

b3 = tk.Button(text="Correct", command=correct)
b3.pack()
tk.Button(text="New game", command=new).pack()
new()
tk.mainloop()

```

10.import tkinter as tk

```

def compute():
    h = float(e1.get())
    b = float(e2.get())
    n = int(e3.get())
    d = h
    for _ in range(n):
        h *= b
        d += 2 * h
    out.delete(0, tk.END)
    out.insert(0, round(d, 2))

```

```

e1 = tk.Entry()
e1.pack()
e2 = tk.Entry()
e2.pack()
e3 = tk.Entry()
e3.pack()
out = tk.Entry()
out.pack()
tk.Button(text="Compute", command=compute).pack()
tk.mainloop()

```

```

11.x = float(input())
y = float(input())

```

```

if x > 0 and y > 0: print("Quadrant I")
elif x < 0 and y > 0: print("Quadrant II")
elif x < 0 and y < 0: print("Quadrant III")
elif x > 0 and y < 0: print("Quadrant IV")
elif x == 0 and y == 0: print("Origin")
elif x == 0: print("Y-axis")
else: print("X-axis")

```

12..import tkinter as tk

```

def convert():
    out.delete(0, tk.END)
    out.insert(0, inp.get().upper())
inp = tk.Entry()

```

```
inp.pack()
out = tk.Entry()
out.pack()
tk.Button(text="Convert", command=convert).pack()
tk.mainloop()
```

```
13..import tkinter as tk
from math import sqrt
```

```
def compute():
    out.delete(0, tk.END)
    out.insert(0, sqrt(float(inp.get())))
```

```
inp = tk.Entry()
inp.pack()
out = tk.Entry()
out.pack()
tk.Button(text="Compute", command=compute).pack()
tk.mainloop()
```

```
14.import tkinter as tk
from tkinter import messagebox
from math import sqrt
def compute():
    try:
        out.delete(0, tk.END)
        out.insert(0, sqrt(int(inp.get())))
    except:
        messagebox.showerror("Error", "Invalid input")
inp = tk.Entry()
inp.pack()
out = tk.Entry()
out.pack()
tk.Button(text="Compute", command=compute).pack()
tk.mainloop()
```