

Zadatak 1.

```
File Edit Format Run Options Windows Help
# 08_01
from turtle import *
fd(100)
lt(90)
fd(200)
lt(90)
fd(100)
lt(90)
fd(200)
lt(90)

mainloop()
```

Zadatak 2.

```
File Edit Format Run Options Windows Help
# 08_02
from turtle import *
for i in range(3):
    fd(100)
    lt(120)

mainloop()
```

Zadatak 3.

```
File Edit Format Run Options Windows Help
# 08_03
from turtle import *
def kvadrat(a, boja):
    pencolor(boja)
    fillcolor(boja)
    begin_fill()
    for i in range(4):
        fd(a)
        lt(90)
    end_fill()

a = int(input())
b = int(input())
kvadrat(a, 'red')
kvadrat(b, 'blue')
mainloop()
```

Zadatak 4.

```
File Edit Format Run Options Windows Help
# 08_04
from turtle import *
from random import *

boje = ['red', 'green', 'blue', 'yellow', 'gray', 'black', 'purple']
n = int(input())
a = int(input())
for i in range(n):
    pencolor(choice(boje))
    pensize(5)
    fd(a + i * a // 10)
    bk(a + i * a // 10)
    lt(360 // n)

mainloop()
```

Zadatak 5.

```
File Edit Format Run Options Windows Help
# 08_05
from turtle import *
n = int(input())
a = int(input())
lt(90)
pencolor('blue')
pensize(3)
for i in range(n):
    fd(a)
    rt(90)
    fd(a)
    lt(90)
ht()

mainloop()
```

Zadatak 6.

```
File Edit Format Run Options Windows Help
# 08_06
from turtle import *
def pravokutnik(a, b, boja):
    pencolor(boja)
    fillcolor(boja)
    begin_fill()
    for i in range(2):
        fd(a)
        lt(90)
        fd(b)
        lt(90)
    end_fill()
    fd(a)
    return

n = int(input())
a = int(input())
b = int(input())
pu()
lt(180)
fd(n // 2 * a)
rt(180)
pd()
boje = ['blue', 'yellow']
for i in range(n):
    pravokutnik(a, b, boje[i % 2])

mainloop()
```

Zadatak 7.

```
File Edit Format Run Options Windows Help
# 08_07
from turtle import *
from random import *

boje = ['red', 'green', 'blue', 'yellow', 'gray', 'black', 'purple']

def kvadrat(a):
    x, y = randint(-300, 300 - a), randint(-300, 300 - a)
    pu()
    goto(x, y)
    pd()
    _b = choice(boje)
    fillcolor(_b)
    pencolor(_b)
    begin_fill()
    for i in range(4):
        fd(a)
        lt(90)
    end_fill()
    return

n = int(input())
a = int(input())
pu()
goto(-300, 300)
pd()
pencolor('red')
for i in range(4):
    fd(600)
    rt(90)
for i in range(n):
    kvadrat(a)
ht()

mainloop()
```

Zadatak 8.

```
File Edit Format Run Options Windows Help
# 08_08
from turtle import *

def kvadrat(a, boja):
    pencolor(boja)
    fillcolor(boja)
    begin_fill()
    for i in range(4):
        fd(a)
        lt(90)
    end_fill()
    return

n = int(input())
a = int(input())
pu(); goto(-300, -300); pd()
boje = ['blue', 'yellow']
for i in range(n):
    for j in range(n):
        kvadrat(a, boje[(i + j) % 2])
        pu()
        fd(a)
        pd()
    pu()
    bk(n * a)
    lt(90)
    fd(a)
    rt(90)
    pd()
ht()

mainloop()
```

Zadatak 9.

```
File Edit Format Run Options Windows Help
# 08_09
from turtle import *
from random import *

boje = ['red', 'green', 'blue', 'yellow', 'gray', 'black', 'purple']

def kvadrat(a):
    b = choice(boje)
    fillcolor(b)
    begin_fill()
    for i in range(4):
        fd(a)
        lt(90)
    end_fill()
    return

n = int(input())
a = int(input())
pencolor('white')
pu()
goto(-300, -300)
pd()

for i in range(n):
    for j in range(n - i):
        kvadrat(a)
        pu()
        fd(a)
        pd()

    pu()
    bk((j + 1) * a)
    lt(90)
    fd(a)
    rt(90)
    pd()
ht()

mainloop()
```

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Zadatak 10.

```
File Edit Format Run Options Windows Help
# 08_10
from turtle import *

def kvadrat(a):
    pencolor('blue')
    fillcolor('blue')
    begin_fill()
    for i in range(4):
        fd(a)
        rt(90)
    end_fill()
    return

a = int(input())
for i in range(3):
    kvadrat(a)
    fd(a)
    lt(120)

mainloop()
```

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Zadatak 11.

a.

```
File Edit Format Run Options Windows Help
# 08_11A
# potrebno je uvesti crt_funk modul
from crt_funk import *

def funk(x):
    return x / (x ** 2 + 4)

x_dim = 400
y_dim = 300
oznake_x = [-5, -4, -3, -2, -1, 0, 1, 2, 3, 4, 5]
oznake_y = [-1, -.8, -.6, -.4, -.2, 0, .2, .4, .6, .8, 1]
opis_x = 'x'
opis_y = 'y'
naziv = 'y = x / (x * x + 4)'
mreža = 1

def main():
    x_d = koord_sustav(naziv, oznake_x, oznake_y, opis_x, opis_y, x_dim, y_dim,
    y_k = []
    for i in range(len(x_d)):
        y_k.append(funk(x_d[i]))
    crtanje_funkcije(y_k, oznake_x, oznake_y, x_dim, y_dim)
    return 'Gotovo'

main()
mainloop()
```


b.

```
File Edit Format Run Options Windows Help
# 08_11B
# potrebno je uvesti crt_funk modul
from crt_funk import *
from math import *

x_dim = 400
y_dim = 300
oznake_x = [0, 3.14, 6.28]
oznake_y = [-1, 0, 1]
opis_x = 'x'
opis_y = 'y'
naziv = 'y = sin(x) i y = cos(x)'
mreža = 1

def main():
    x_d = koord_sustav(naziv, oznake_x, oznake_y, opis_x, opis_y, x_dim, y_dim,
    y_k1 = []
    y_k2 = []
    for i in range(len(x_d)):
        y_k1.append(sin(x_d[i]))
        y_k2.append(cos(x_d[i]))
    pensize(2)
    pencolor('red')
    crtanje_funkcije(y_k1, oznake_x, oznake_y, x_dim, y_dim)
    pencolor('blue')
    crtanje_funkcije(y_k2, oznake_x, oznake_y, x_dim, y_dim)
    return 'Gotovo'

main()
mainloop()
```

Zadatak 12.

```
File Edit Format Run Options Windows Help
# 08_12
from turtle import *
from random import *

boje = ['red', 'green', 'blue', 'yellow', 'gray', 'black', 'purple']

def trokut(a, boja):
    fillcolor(boja)
    pencolor(boja)
    begin_fill()
    for i in range(3):
        fd(a)
        lt(120)
    end_fill()
    return

n = int(input())
a = int(input())

for i in range(n):
    b = choice(boje)
    trokut(a, b)
    lt(360 // n)

ht()
mainloop()
```

Zadatak 13.

```
File Edit Format Run Options Windows Help
# 08_13
from turtle import *

n = int(input())
m = int(input())
a = int(input())
for i in range(n):
    for j in range(m):
        fd(a)
        lt(360 // m)
    fd(a)
    rt(360 // n)

ht()
mainloop()
```

Zadatak 14.

```
File Edit Format Run Options Windows Help
# 08_14
from turtle import *

n = int(input())
a = int(input())
pensize(2)

for i in range(n):

    pencolor('blue')
    fd(a // 2)
    rt(90)
    pencolor('red')
    fd(a)
    bk(a)
    lt(90)
    pencolor('blue')
    fd(a // 2)
    rt(90 - 180 // n)
    pencolor('violet')
    fd(a // 2)
    bk(a // 2)
    lt(90 - 180 // n + 360 // n)

ht()
mainloop()
```

8

Zadatak 15.

```
File Edit Format Run Options Windows Help
# 08_15
from turtle import *
from random import *

boje = ['red', 'green', 'blue', 'yellow', 'gray', 'black', 'purple']

r = int(input())

pu()
fd(r)
lt(90)
pd()
while r > 0:
    b = choice(boje)
    pencolor(b)
    fillcolor(b)
    begin_fill()
    circle(r)
    end_fill()
    pu()
    lt(90)
    fd(10)
    rt(90)
    pd()
    r -= 10
ht()
mainloop()
```

Zadatak 16.

```
File Edit Format Run Options Windows Help
# 08_16
from turtle import *
from random import *

boje = ['red', 'green', 'blue', 'gray', 'black', 'purple']

def kvadrat(a):
    pencolor('yellow')
    fillcolor('yellow')
    begin_fill()
    pu()
    goto(-a // 2, - a // 2)
    pd()
    for i in range(4):
        fd(a)
        lt(90)
    end_fill()
    return

def krug(r, x, y, boja):
    pu()
    home()
    goto(x + r, y)
    lt(90)
    pd()
    pencolor(b)
    fillcolor(b)
    begin_fill()
    circle(a // 4)
    end_fill()

a = int(input())
kvadrat(a)
for i in range(-1, 2, 2):
    for j in range(-1, 2, 2):
        b = choice(boje)
        krug(a // 4, i * a // 4, j * a // 4, b)

ht()
mainloop()
```

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Zadatak 17.

```
File Edit Format Run Options Windows Help
# 08_17
from turtle import *
from random import *

boje = ['red', 'green', 'blue', 'yellow', 'gray', 'black', 'purple']

r = int(input())
pencolor('white')

for i in range(4):
    b = choice(boje)

    fillcolor(b)
    begin_fill()
    fd(r)
    lt(90)
    circle(r, 90)
    lt(90)
    fd(r)
    lt(180)
    end_fill()

ht()
mainloop()
```

Zadatak 18.

```
File Edit Format Run Options Windows Help
# 08_18
from turtle import *

boje = ['blue', 'black', 'red', 'yellow', 'green']

r = int(input())
pu();
lt(180);
fd(r // 2);
rt(90);
pd()
pensize(5)
for i in range(5):
    pencolor(boje[i])
    circle(r)
    if i == 2:
        pu();
        lt(90);
        fd(3 * r);
        lt(90);
        fd(r);
        lt(180);
        pd()
    else:
        pu();
        rt(90);
        fd(2 * r);
        lt(90);
        pd()

ht()
mainloop()
```

Zadatak 19.

```
File Edit Format Run Options Windows Help
# 08_19
from turtle import *
from random import *

boje = ['red', 'green', 'blue', 'gray', 'black', 'purple']

def kvadrat(a, boja):
    pencolor(boja)
    fillcolor(boja)
    begin_fill()
    pu()
    goto(-a // 2, -a // 2)
    pd()
    for i in range(4):
        fd(a)
        lt(90)
    end_fill()
    return

def polukrug(r, x, y, boja, k):
    pu()
    home()
    goto(x, y)
    lt(k)
    pd()
    pencolor(boja)
    fillcolor(boja)
    begin_fill()
    circle(r, 180)
    end_fill()

a = int(input())
kvadrat(a, choice(boje))
polukrug(a // 2, a // 2, -a // 2, choice(boje), 0)
polukrug(a // 2, a // 2, a // 2, choice(boje), 90)
polukrug(a // 2, -a // 2, a // 2, choice(boje), 180)
polukrug(a // 2, -a // 2, -a // 2, choice(boje), 270)

ht()
mainloop()
```


8

Zadatak 20.

```
File Edit Format Run Options Windows Help
# 08_20
from turtle import *
from random import *

boje = ['red', 'green', 'blue', 'gray', 'black', 'purple']

n = int(input())
r = int(input())

pu();
rt(180);
fd(n * r);
lt(90);
fd(n * r);
lt(180);
pd()
for i in range(n):
    for j in range(n - i):
        b = choice(boje)
        pencolor(b)
        fillcolor(b)
        begin_fill()
        circle(r)
        end_fill()
        pu();
        rt(90);
        fd(2 * r);
        lt(90);
        pd()

    pu();
    fd(2 * r);
    lt(90);
    fd((2 * j + 1) * r);
    rt(90);
    pd()

ht()
mainloop()
```

8

Zadatak 21.

```
File Edit Format Run Options Windows Help
# 08_21
from turtle import *
from random import *

boje = ['red', 'green', 'blue', 'cyan', 'yellow', 'gray', 'black', 'magenta', 'purple']

r = int(input())

for i in range(6):
    b = choice(boje)
    fillcolor(b)
    pencolor(b)
    begin_fill()
    circle(r, 60)
    lt(120)
    circle(r, 60)
    end_fill()
    lt(60)

ht()
mainloop()
```

Zadatak 22.

```
File Edit Format Run Options Windows Help
# 08_22
from turtle import *
from random import *
from math import *

boje = ['red', 'green', 'blue', 'cyan', 'yellow', 'gray', 'black', 'magenta', 'purple']

r = int(input())

for i in range(6):
    pu()
    fd(round(r * sqrt(3) / 2))
    pd()
    b = choice(boje)
    pencolor(b)
    fillcolor(b)
    begin_fill()
    circle(r // 2)
    end_fill()
    pu()
    bk(r * sqrt(3) / 2)
    lt(60)
    pd()

ht()
mainloop()
```

Zadatak 23.

```
File Edit Format Run Options Windows Help
# 08_23
from turtle import *
from random import *
from math import *

boje = ['red', 'green', 'blue', 'cyan', 'yellow', \
        'gray', 'black', 'magenta', 'purple']

a = int(input())
b = int(input())

c = choice(boje)
pencolor(c)
fillcolor(c)
begin_fill()
rt(90);
circle(b // 2, 180);
lt(90);
fd(b)
end_fill()

c = choice(boje)
pencolor(c)
fillcolor(c)
begin_fill()
rt(90);
fd(a);
lt(90);
circle(a // 2, 180);
end_fill()

k = round(atan(a / b) * 180 / pi)
d = round((a * a + b * b) ** (1 / 2))
c = choice(boje)
pencolor(c)
fd(b);
lt(180 - k);
fd(d)

fillcolor(c)
begin_fill()
bk(d);
rt(90);
circle(d // 2, 180)
end_fill()

ht()
mainloop()
```

Zadatak 24.

```
File Edit Format Run Options Windows Help
# 08_24
from turtle import *
from random import *

boje = ['red', 'green', 'blue', 'cyan', 'yellow', \
        'gray', 'black', 'magenta', 'purple']

n = int(input())
a = int(input())

for i in range(n):
    b = choice(boje)
    pencolor(b)
    fillcolor(b)
    begin_fill()
    fd(a);
    bk(a);
    rt(90)
    circle(a // 2, 180)
    end_fill()
    rt(90 - 360 // n)

ht()
mainloop()
```

Zadatak 25.

```
File Edit Format Run Options Windows Help
# 08_25
from turtle import *
from random import *
from math import *

boje = ['red', 'green', 'blue', 'cyan', 'yellow', \
        'gray', 'black', 'magenta', 'purple']

n = int(input())
a = int(input())

b = a
k = 0
x, y = a, 0
for i in range(n):
    c = boje[i % len(boje)]
    pencolor(c)
    fillcolor(c)
    begin_fill()
    goto(x, y)
    lt(90 - k)
    fd(a)
    (x, y) = pos()
    goto(0, 0)
    end_fill()
    k = round(atan(b / a) / pi * 180)
    b = (a ** 2 + b ** 2) ** (1 / 2)

ht()
mainloop()
```