Ulepszone6

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[1]:
```julia
using Printf
using Core

function P(k)
    if k == 2
        return BigFloat(2, 128)
end
return power(2, k-1) * s(k)
end
```

[1]: P (generic function with 1 method)

[2]:
```julia
function s(k)
    if k == 2
        return BigFloat(1, 128)
    end
    return s(k-1)/2/c(k)
end
```

[2]: s (generic function with 1 method)

[3]:
```julia
function c(k)
    if k==2
        return BigFloat(0, 128)
    end
    return sqrt(1/2*(1+c(k-1)))
end
```

[3]: c (generic function with 1 method)

[4]:
```julia
function power(a, b)
    if b == 0
        return BigFloat(1, 128)
    end
    return a*power(a, b-1)
end
```

[4]: power (generic function with 1 method)

[ ]:

```
[97]: k = 2
      while k<=256
          @printf("%llf %d \n", P(k), k)
          k = k+1
      end
```

```
2.000000 2
2.828427 3
3.061467 4
3.121445 5
3.136548 6
3.140331 7
3.141277 8
3.141514 9
3.141573 10
3.141588 11
3.141591 12
3.141592 13
3.141593 14
3.141593 15
3.141593 16
3.141593 17
...
3.141593 244
3.141593 245
3.141593 246
3.141593 247
3.141593 248
3.141593 249
3.141593 250
3.141593 251
3.141593 252
3.141593 253
3.141593 254
3.141593 255
3.141593 256
```

```
[98]: P(256)
```

[98]: 3.141592653589793238462643383279502884197169399375105820974944592307816406286509