

In[⌘]:= **Clear**["Global`\*"];

$$h = \frac{R \cos\left[\frac{\pi}{n}\right]}{\tan[\varphi]};$$

$$\text{Simplify}\left[\text{ArcCos}\left[\frac{R^2 \cos\left[\frac{2\pi}{n}\right] + h^2}{R^2 + h^2}\right]\right]$$

$$\text{Out[⌘]= ArcCos}\left[\frac{\cos\left[\frac{2\pi}{n}\right] + \cos\left[\frac{\pi}{n}\right]^2 \cot[\varphi]^2}{1 + \cos\left[\frac{\pi}{n}\right]^2 \cot[\varphi]^2}\right]$$

```

In[ ]:= (*****
n = 100;
φ = 50 °;
R = 7;
(*****)
h =  $\frac{R \cos\left[\frac{\pi}{n}\right]}{\tan[\varphi]}$ ;
Show[

Table[
Graphics3D[{
  RGBColor[0, 1, 1, 1],
  EdgeForm[],

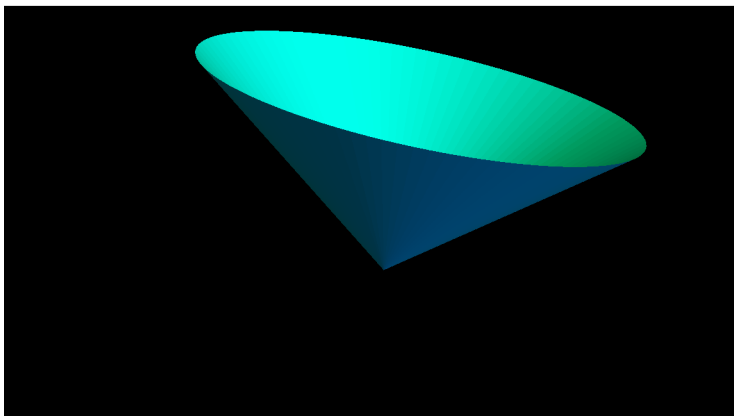
  Polygon[{
    {R Cos[(i - 1)  $\frac{2\pi}{n}$ ], R Sin[(i - 1)  $\frac{2\pi}{n}$ ], 0},
    {R Cos[i  $\frac{2\pi}{n}$ ], R Sin[i  $\frac{2\pi}{n}$ ], 0},
    {0, 0, -h}
  ]}
],
{i, n}],

Boxed → False,
(*ViewPoint→20 {Cos[φ], Sin[φ], .3},
SphericalRegion→Sphere[{0,0,0},1],

PlotRange→{{}, {}, {}, {}, {}}, *)
Background → Black,
ImageSize → .2 {1920, 1080}
]

```

Out[ ]:=



```

In[ ]:=  $\varphi_{mre} = \text{ArcCos}\left[\frac{\cos\left[\frac{2\pi}{n}\right] + \cos\left[\frac{\pi}{n}\right]^2 \cot[\varphi]^2}{1 + \cos\left[\frac{\pi}{n}\right]^2 \cot[\varphi]^2}\right];$ 

Rmre =  $\sqrt{R^2 + h^2}$ ;
grafikamreže = Show[

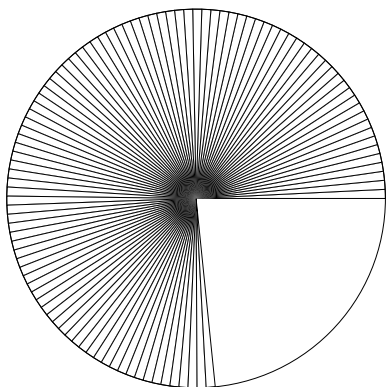
  Table[
    Graphics[{
      RGBColor[1, 1, 1, 1],
      EdgeForm[Thin],

      Polygon[{
        {Rmre Cos[(i - 1)  $\varphi_{mre}$ ], Rmre Sin[(i - 1)  $\varphi_{mre}$ ]},
        {Rmre Cos[i  $\varphi_{mre}$ ], Rmre Sin[i  $\varphi_{mre}$ ]},
        {0, 0}
      }],
    ],
    {i, n}],
  Graphics[{
    Circle[{0, 0}, Rmre],
    EdgeForm[Thin]
  }],

  Boxed → False
]

```

Out[ ]:=



```

In[ ]:= Export[
  StringJoin[{
    "c:\\Users\\gal\\Downloads\\piramidni",
    " n", ToString[n],
    " R", ToString[R],
    "  $\varphi$ ", ToString[Round[N[ $\frac{\varphi}{\circ}$ ]]],
    ".svg"
  }],
  grafikamreže];
CopyToClipboard[StringReplace[ToString[N[2 Rmre]], "." → ", "]]

```