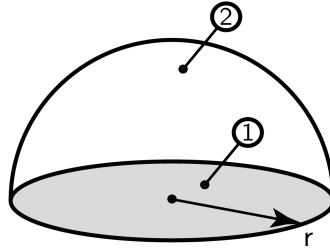# View Factor 56

Determine the view factor Φ_{22}:

$$\Phi_{22}$$

A flat circle can never see itself and therefore:

$$\Phi_{11} = 0$$

From the summation rule $(\Phi_{11} + \Phi_{12} = 1)$ one finds:

$$\Phi_{12} = 1$$

Using the reciprocity rule $(\Phi_{12}A_1 = \Phi_{21}A_2)$:

$$\Phi_{21} = \Phi_{12}\frac{A_1}{A_2} = \frac{\pi r^2}{\frac{1}{2}4\pi r^2} = \frac{1}{2}$$

From the summation rule $(\Phi_{21} + \Phi_{22} = 1)$ it yields:

$$\Phi_{22} = 1 - \Phi_{21} = \frac{1}{2}$$