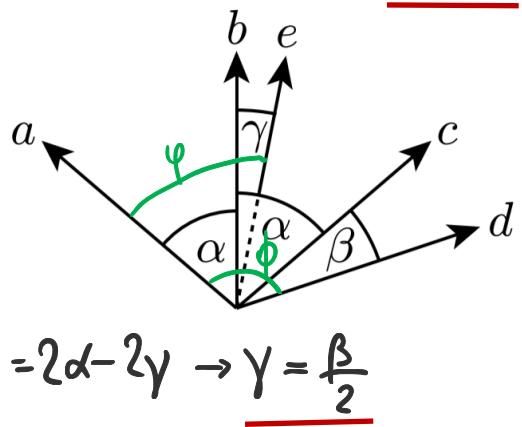


CG - Assignment 2 Stefano Gonçalves Simas

Exercise 2

$$\left. \begin{array}{l} \text{1}^{\text{st}} \text{ case: } \not \propto a,d : \phi \Rightarrow \phi = 2\alpha + \beta \\ [\text{d after c}] \quad \not \propto a,e : \varphi \Rightarrow \varphi = \alpha + \gamma \\ \text{We know that } \phi = 2\varphi \end{array} \right\} \phi = 2\alpha + \beta = 2\alpha + 2\gamma \rightarrow \gamma = \frac{\beta}{2}$$



$$\left. \begin{array}{l} \text{2}^{\text{nd}} \text{ case: } \not \propto a,d : \phi \Rightarrow \phi = 2\alpha - \beta \\ [\text{d before c}] \quad \not \propto a,e : \varphi \Rightarrow \varphi = \alpha - \gamma \\ \text{We know that } \phi = 2\varphi \end{array} \right\} \phi = 2\alpha - \beta = 2\alpha - 2\gamma \rightarrow \gamma = \frac{\beta}{2}$$

$$\left. \begin{array}{l} \text{3}^{\text{rd}} \text{ case: } \not \propto a,d : \phi \Rightarrow \phi = 2\alpha - \beta \\ [\text{d before c}] \quad \not \propto a,e : \varphi \Rightarrow \varphi = \alpha - \gamma \\ \text{We know that } \phi = 2\varphi \end{array} \right\} \phi = 2\alpha - \beta = 2\alpha - 2\gamma \rightarrow \gamma = \frac{\beta}{2}$$

Exercise 3

One explanation could be that as the moon surface is really rough and full of dust, it makes it look matte. All the incoming light is reflected evenly in every direction, and the fact that it's so rough and irregular makes it seem like it's not a perfect sphere. The rays hitting at the extremities of the moon will hit rocks and dust making bounce as it happens in the center. The fact that we are far from the moon helps hide the differences in reflection between the center and the extremities.