

# Day and night duration on Earth

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## 1 Introduction

Starting from the simple explanation “As Earth globe self-rotates on itself in about 24h on an axis that is about  $23^\circ$  from normal to ecliptic plane where it rotates in one year around Sun, day is when Sun can be seen in the sky, as on the lighted side, and night when Sun goes under the horizon and is hidden by Earth’s mass”, we’ll compute day and night duration on Earth.

## 2 Some math on a sphere