

Treasure of Classic
and Modern Puzzles

Math 'n' Logic Puzzles



The Monk Travel* *after Karl Dunker*

One morning, exactly at sunrise, a Buddhist monk began to climb a tall mountain. The narrow path, no more than a foot or two wide, spiraled around the mountain to a glittering temple at the summit.

The monk ascended the path at varying rates of speed, stopping many times along the way to rest and eat the dried fruit he carried with him. He reached the temple shortly before sunset. After several days of fasting and meditation he began his journey back along the same path, starting at sunrise and again walking at variable speeds with many pauses along the way. His average speed descending was, of course, greater than his average climbing speed.

Prove that there is a spot along the path that the monk will occupy on both trips at precisely the same time of day.

*This puzzle was inspired to the publication on our site by a message from Julia J.

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The Monk Travel (solution)

One of the most elegant ways to prove there is a spot along the path that the monk will occupy on both trips at precisely the same time of day is as follows.

The monk starts his way down at the same time as he starts his way up, except several days later - exactly at sunrise. Now let's suppose there are two monks. And they both start their own way, but one starts from the top of the mountain (i.e. descending down) while another - from the bottom (i.e. climbing up). Since there is only a narrow path spiraled the mountain the two monks will definitely meet at some point along the path and at some certain time of day (such a meeting always happens at some certain point of time and place)! This proves that the way up and the way down when are started at some certain time of day (in our case - at sunrise) both have a point along the path which the monk passes at precisely the same time of day.

Karl Dunker himself writes that there are several ways to go about it, "but probably none is... more drastically evident than the following. Let ascent and descent be divided between two persons on the same day. They must meet. Ergo... With this, from an unclear dim condition not easily surveyable, the situation has suddenly been brought into full daylight."

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