



The Distance to the Sun and Moon



The Moon and the Sun appear to be exactly the same size in the sky. Why? The Sun is 400 times bigger in diameter than the Moon, shouldn't it look bigger in the sky? The Moon appears to be the same size because of a rare coincidence. The Sun is 400 times farther away than the Moon, which makes the two objects appear to be the same size in the sky.

A Puzzle

To fully understanding how close the Moon is compared to the Sun, here's a puzzle. The information that you need to solve this puzzle is found in the paragraph above.

Imagine the distance between the Earth and Sun using a 40-story building. The Earth is the ground floor (*the 1st floor*) and the Sun is the top floor. There are 10 steps between each floor. On which step, between which floors, would you place the Moon to have the correct distance model.

(Hint: Figure out how many steps there are by multiplying the number of steps between each floor by the number of floors.)

The Moon would be on: step number _____, above floor number _____.

