

Will Schell

Video: The Infinite Hotel Paradox

url: [https://www.youtube.com/watch?v=Uj3\\_KqkI9Zo](https://www.youtube.com/watch?v=Uj3_KqkI9Zo)

Duration: 6 minutes

This video contains a description of how the Infinite Hotel works. The Infinite Hotel was introduced by David Hilbert in 1924. This problem of the infinite hotel works with figuring out if every room in the hotel is full how to make room for a new customer that would like to stay there so that they are not turning away customer. This problem relates to our course because it is working within the system. If a known number of individuals or groups arrives then there is a mathematical way to create more space in the hotel for the new customers. This all occurs within the system.

$$R*40 + S*20 + I1*20 + I2*20 = \text{GRADE}$$

$$.75*40 + 1*20 + 1*20 + 1*20 = 90$$