

## Geometric Series

- Solve each of the problems using geometric series.
- Solve each problem using a different method.

1. A tennis ball is dropped from the top of a building 50m above a paved road. In each bounce the ball reached vertical height that is 30% of the previous vertical height. Determine the total vertical distance that the ball has traveled when it has contacted the road for the fourth time.

2. A volleyball is dropped from the top of a building 90m above a paved road. In each bounce the ball reached vertical height that is 10% of the previous vertical height. Determine the total vertical distance that the ball has traveled when it has contacted the road for the fifth time.

3. A beach ball is dropped from the top of a building 10m above a paved road. In each bounce the ball reached vertical height that is 15% of the previous vertical height. Determine the total vertical distance that the ball has traveled when it has contacted the road for the third time.

4. Which method do you prefer? Explain why.