1. A car accelerates from rest at a constant rate of \(1.5 \text{ m/s}^2\) for 3 seconds. Find the velocity, and displacement of the car at the end of that time.

2. A person throws a stone vertical upward with an initial speed of 12.5 m/s on the top of a cliff which is 105 m. What is the maximum height that the stone can reach? How long does it take to land on the ground?

3. A small rock was thrown at 30° with horizontal direction and speed of 15.0 m/s. (a) How long did it take the rock land on the ground (b) Find the range of the rock. Assuming the small rock was thrown and it landed at the same height.

4. A piece of Mahjong was accidently sliding from the edge of a 1.00 m high smooth horizontal table and landed on the floor 0.49 m away from the bottom of the table. Find (a) How long did it take to land on the floor? (b) The velocity just before hitting the floor.