

3. If our action hero does in fact reach the back of the bus, what will be both the speed of the bus and the speed of our action hero?

4. Suppose that a rock is dropped from the edge of a cliff $90m$ high. One second later, a second rock is thrown straight down with just the right velocity to ensure that the two rocks hit the ground at the same time. What is the initial velocity of the *second rock*?

5. What is the impact velocity of the *second rock* with the ground?