

You are responsible for making a recommendation on how to invest money to decrease potential financial exposure at Richman Investments. Please consider the following scenarios. You can recommend investing in one or more of the scenarios presented. In your recommendation, be sure to describe why you are recommending which scenario or scenarios to invest in. Your recommendation should include justification based on calculations of ARO, ALE, Savings with Control, Safeguard Value, and Realized Savings.

**Remember the following:**

SLE: Total loss expected from a single incident

ARO: Number of times an incident is expected to occur in a year

ALE: Expected loss for a year

$ALE = SLE \times ARO$

Safeguard value: Cost of a safeguard or control

**Scenario 1:** Richman Investments provides laptops to several employees. The value of each laptop is \$1000, and approximately 100 employees have these company-owned devices. In the past year, employees have lost 10 laptops. Richman is considering buying insurance for each laptop. Use the ALE to determine the usefulness of this safeguard. For example, Richman could purchase insurance for each laptop for \$50 per year. It is estimated that if the insurance is purchased, the ARO will decrease to 5.

**Scenario 2:** Richman Investment hosts a website to interact with their clients. They are concerned about the website being hacked. They estimate the cost of a hacking costing \$10,000 and that it could happen once per year. Richman is considering buying an intrusion detection system to cut down on the likelihood of attacks. The system costs \$4,000. It is estimated that if the system is purchased, the frequency of hacks will be cut in half.

**Scenario 3:** Richman investments relies heavily on their high-end servers that are needed to process the vast amount of information that their investment customers require. Whenever the server goes down it costs them approximately \$2,000. In the past year, this has happened 12 times. Richman is considering investing in an upgraded server that will reduce downtime to 2 times per year. Richman can invest \$15,000 to purchase the new server.

**Scenario 4:** Richman investments anticipates they will fall victim to 25 phishing attacks this year, with each attack costing them \$1,000. Richman is considering investing in a new training program that promises to cut the number of successful attacks to 10 per year. This training will cost them \$13,000.

**Part 1:** If you had a \$10,000 budget, what recommendations would you make and why?

**Part 2:** If you had a \$15,000 budget, what recommendations would you make and why?

**Part 3:** If you had a \$25,000 budget, what recommendations would you make and why?