

# Probability Examples

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## Probability Examples

### Example:

- a) Suppose a system consists of components connected in *series*. The system fails if any one of the components fails. If there are  $n$  mutually independent components and each fails with probability  $p$ , what is the probability the system will **fail**?
- b) Suppose the system of components is now connected in parallel, what is the probability the system will **fail**?

Hint: Start each part with a sketch of the system being analyzed. Think about how the system will **fail** and how it will **work**.

**Exercise: Simulate a system in *series*.**

**Exercise: Simulate a system in *parallel*.**