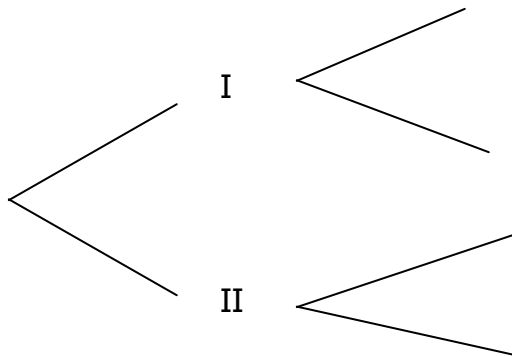


Name \_\_\_\_\_

1. A factory has two machines that produce bolts. Machine I produces 60% of the bolts, and 3% of its bolts are defective. Machine II produces 40% of the bolts and 2% of its bolts are defective.

A. Draw a probability tree for the given information.



- B. If it is **given that** a bolt came from Machine I, what is the probability that it is defective?  $P(D|I)$
- C. What is the probability that a bolt selected at random came from Machine II **and** is defective?  $P(II \cap D)$
- D. What is the probability that a random bolt is defective?  $P(D)$
- E. **Given that** a bolt is defective, what is the probability that it came from Machine II?  $P(II|D)$