Problem: Suppose a clinic has two kinds of patients: those with flu and those without. 40% of patients have the flu, and 60% do not. Of those who have the flu, 90% have a fever. Of those who do not have the flu, only 10% have a fever. If a patient has a fever, what is the probability they have the flu?

Problem: A computer store sells three types of computers: desktop, laptop, and tablet. 50% of the customers buy a desktop, 30% buy a laptop, and 20% buy a tablet. 70% of desktop buyers are students, 40% of laptop buyers are students, and 90% of tablet buyers are students. What is the probability that a customer who is a student bought a tablet?

Problem: A factory has two machines, A and B. Machine A produces 60% of the items, while machine B produces 40%. 3% of the items from machine A are defective, while 5% from machine B are defective. If an item is found to be defective, what is the probability it was produced by machine A?

Problem: A box contains 3 white balls and 2 black balls. One ball is drawn, and its color is noted, but not replaced. Then a second ball is drawn. What is the probability that the second ball is black given that the first ball drawn was white?