

- 43** (a) The only way to obtain a sum of 12 is for both dice to show a 6. Since these events are independent, the probability of two 6's is $(0.3)(0.3) = 0.09$ or 9%.
- (b) There are two ways to obtain a sum of 11. The red die shows a 5 and the blue die a 6, or vice versa. The roll of the two dice are independent. The probability of the red die showing a 5 is 0.2 and the probability of the blue die showing a 6 is 0.3. The probability of a sum of 11 is $(0.2)(0.3) = 0.06$. Similarly the probability of the red die showing a 6 and the blue die a 5 is 0.06. Since these events are mutually exclusive, the probability of a sum of 11 is $0.06 + 0.06 = 0.12$ or 12%.