

**Chapter II**  
**Introduction to Probability**  
**Solutions**

**1. 1.**

Let  $W$  denote the event of selecting a white ball. Then

$$P(W) = \frac{n}{m+n}$$

**1. 2.**

Let  $S$  denote all possible outcomes:

$$S = \{hh, ht, th, tt\}.$$

The probability that at least one “head” will occur will then be equal to

$$P = \frac{3}{4}.$$

**1. 3.**

Denote by

$I$ : “The stock issue will increase in price.”

$U$ : “The stock issue will remain unchanged.”

$D$ : “The stock issue will decrease in price.”

1.

$$P(I \cup U) = P(I) + P(U) = 0.30 + 0.20 = 0.50.$$

2.

$$P(I \cup D) = P(I) + P(D) = 0.30 + 0.50 = 0.80.$$

*(Last updated: 05.05.2009)*