Statistics 1 Assignment 9 Chapter 6 Sections 3-4

1. A mutual fund company offers its customers several different fund: a money market fund, three different bond funds, two stock funds, and a balanced fund. Among customer who own share in just one fund, the percentages of customers in the different funds are as follows:

Money Market 20%

Short-term bond 15%

Intermediate-term bond 10%

Long-term bond 5%

High-risk stock 18%

Moderate-risk stock 25%

Balanced fund 7%

A customer who owns shares in just one fund is to be selected at random

What is the probability that the individual owns shares in the balance fund?

What is the probability that the individual owns shares in a bond fund?

What is the probability that the selected individual does not own shares in a stock fund?

1. A deck of 52 cards is mixed well and 5 cards are dealt

There are 2,598,960 possible hands of which 1,287 consist entirely of spades. What is the probability that this would occur?

If only 63,206 hands contain only spades and clubs, what is the probability that this would occur?

Using the information above, what is the probability that a hand contains cards from exactly two suits?

1. A survey of adults 18-50 indicated if they had 1 or more tattoos. The accompanying table summarizes the results of this survey

|  |  |  |
| --- | --- | --- |
|  | Has at least 1 Tattoo | Has no Tattoos |
| Age 18-29 | 18 | 32 |
| Age 30-50 | 6 | 44 |

Assume these data are probability of adults 18-50 in the US and that a random adult is selected.

What is the probability that this person has a tattoo?

What is the probability that this person has a tattoo given that they are of age 18-29?

What is the probability that this person has a tattoo given that they are age 30-50?

What is the probability that the individual is age 18-29 given that they have at least one tattoo?