4-1	Sample Spaces and Probability		10, 11, 12, 13, 17, 18, 21, 29,25

10. A probability experiment is conducted. Which of these cannot be considered a probability outcome?

a. 2l3   *d.* 1.65   *g.* 1

b. 0.63   *e.* _0.44   *h.* 125%

c. -3l5   *f.* 0   *i.* 24%

11. Classify each statement as an example of classical probability, empirical probability, or subjective probability.

a. The probability that a person will watch the 6 o'clock evening news is 0.15.

b. The probability of winning at a Chuck-a-Luck game is .

c. The probability that a bus will be in an accident on a specific run is about 6%.

d. The probability of getting a royal flush when five cards are selected at random is .

e. The probability that a student will get a C or better in a statistics course is about 70%.

f. The probability that a new fast-food restaurant will be a success in Chicago is 35%.

g. The probability that interest rates will rise in the next 6 months is 0.50.

12. (ans) Rolling a Die If a die is rolled one time, find these probabilities.

a. Getting a 2

b. Getting a number greater than 6 0

c. Getting an odd number

d. Getting a 4 or an odd number

e. Getting a number less than 7

f. Getting a number greater than or equal to 3

g. Getting a number greater than 2 and an even number

13. Rolling Two Dice If two dice are rolled one time, find the probability of getting these results.

a. A sum of 9

b. A sum of 7 or 11

c. Doubles

d. A sum less than 9

e. A sum greater than or equal to 10

17. Human Blood Types Human blood is grouped into four types. The percentages of Americans with each type are listed below.

O 43%   A 40%   B 12%   AB 5%

Choose one American at random. Find the probability that this person

a. Has type O blood

b. Has type A or B

c. Does not have type O or A

18-Gender of College Students In 2004, 57.2% of all enrolled college students were female. Choose one enrolled student at random. What is the probability that the student was male?

21-Gender of Children A couple has three children. Find each probability.

a. All boys

b. All girls or all boys

c. Exactly two boys or two girls

d. At least one child of each gender

25- College Debt The following information shows the amount of debt students who graduated from college incur.

$1 to $5000	$5001 to $20,000	$20,001 to $50,000	$50,000+
27%	40%	19%	14%

If a person who graduates has some debt, find the probability that

a. It is less than $5001

b. It is more than $20,000

c. It is between $1 and $20,000

d. It is more than $50,000

29- Rolling Dice Roll two dice and multiply the numbers.

a. Write out the sample space.

b. What is the probability that the product is a multiple of 6?

c. What is the probability that the product is less than 10?