Name _____ Class _____ Date _____

# 11-3 Practice

*Form K*

## Probability of Multiple Events

**Classify each pair of events as *dependent* or *independent*.**

1. Roll a number cube. Then roll it again.

2. Pull a card from a deck of playing cards. Then pull a second card.

3. Randomly choose a student from your class. Then choose another student.

4. Flip a coin. Then spin a spinner.

**Use the table shown below to answer the following questions.**

| Movie Collection | | |
|---|---|---|
| | Video | DVD |
| Action | 12 | 26 |
| Comedy | 14 | 8 |
| Drama | 4 | 16 |

5. You randomly pick a video and a DVD. What is the probability that you pick an action video and a comedy DVD?

6. Your friend randomly picks a video and a DVD. What is the probability that she picks a comedy video and an action DVD?

7. What is the probability of randomly picking a drama video and a comedy DVD?

8. **Writing** Explain the difference between independent events and dependent events.

Name _____ Class _____ Date _____

# 11-3 Practice (continued)

Form K

## Probability of Multiple Events

**Two fair number cubes are rolled. State whether the following events are mutually exclusive.**

9. The sum is odd. The sum is less than 5. _____

10. The difference is 1. The sum is even. _____

11. The sum is a multiple of 4. The sum is odd. _____

**Find the probability for the following mutually exclusive events.**

12. Students can either participate in track and field or play baseball. About 13% of students participate in track and field. About 8% play baseball. What is the probability that a student chosen at random either participates in track and field or plays baseball?

13. About $\frac{1}{5}$ of a town's population has black hair. About $\frac{2}{7}$ of the population has blonde hair. What is the probability that a person chosen at random from this town will have either black hair or blonde hair?

**Use the diagram at the right to answer the following questions.**

14. Suppose you randomly select a shape from this circle. What is the probability that the shape is black or has five points?

15. What is the probability of randomly selecting a shape that is black or has four points?

Name _____ Class _____ Date _____

# 11-6 Practice

*Form K*

## Analyzing Data

**Find the mean, median, and mode of the following data set.**

| Points Per Game | | | | | |
|---|---|---|---|---|---|
| | Game 1 | Game 2 | Game 3 | Game 4 | Game 5 |
| Points | 24 | 17 | 15 | 30 | 24 |

**1.** mean **2.** median **3.** mode

$24 + 17 + 15 + 30 + 24 = 110$

$110 \div 5 =$ ☐

**Identify the outlier in the following data set. Then find the mean, median, and mode.**

| Height of Students | | | | | | |
|---|---|---|---|---|---|---|
| | Sue | Dalia | Ling | Roberto | Eleanore | Cayden |
| Height (in.) | 58 | 60 | 74 | 58 | 62 | 64 |

**4.** outlier **5.** mean **6.** median **7.** mode

**8. Reasoning** Which measure of central tendency would be most affected by removing the outlier from the above data set? Explain your reasoning.

**9.** Compare the following sets of data.

| Great Lakes Coastal Water Temperatures (°F) | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
| Buffalo, NY | 34 | 28 | 33 | 46 | 56 | 65 | 72 | 70 | 61 | 50 | 44 | 38 |
| Oswego, NY | 49 | 48 | 48 | 49 | 52 | 57 | 62 | 65 | 64 | 62 | 58 | 54 |

Name _____ Class _____ Date _____

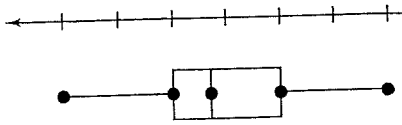
# 11-6 Practice (continued)

Form K

## Analyzing Data

**Make a box-and-whisker plot for each set of values.**

**10.** 15, 19, 24, 16, 12, 18, 20, 22, 16, 17



**11.** 26, 32, 27, 36, 28, 30, 31, 28

**Find the following percentiles of the data set displayed below.**

| |
|---|
| 27, 28, 29, 29, 30, 31, 32, 33, 34, 35, |
| 36, 36, 37, 38, 39, 40, 40, 41, 42, 43 |

**12.** 45th percentile

**13.** 70th percentile

**14.** 25th percentile

**15.** 95th percentile

**16.** 80th percentile

**17.** 15th percentile

**18. Error Analysis** Your friend calculated the tenth percentile of the data set shown above and got 35. What error did your friend make? What is the correct answer?

**19. Open-Ended** Describe a situation in which the median would be a more useful measure of central tendency than the mean.