## Introducing Pictographs

The class conducted a survey of the favorite season of 31 students. Here is what they found out:

15 students like summer best.
7 students like winter best.
2 students like fall best.
The rest like spring best.
(1) How many students like spring best?
(2) What did most students say is their favorite season?
(3) What season did the fewest number of students choose as their favorite?
(4) How many more students chose summer as their favorite season than chose spring? $\qquad$
(5) If the students had been given only the choices "like summer best" or "like another season best," which would have more votes?

## Test Prep

(6) What is a rule for the table?
A. Input $\times 2=$ Output
B. Input $-5=$ Output
C. Input $\div 2=$ Output
D. Input $+5=$ Output

| Input | Output |
| :---: | :---: |
| 5 | 10 |
| 9 | 14 |
| 3 | 8 |
| 7 | $\square$ |

## Making Pictographs

Thirty-four people were asked their favorite color.
Purple
(1) Which favorite color was chosen most often?
(2) Of the 4 colors, which was chosen by the fewest people?
(3) How many people does each crayon represent? $\qquad$
4. How many more people chose purple as their favorite than chose green? $\qquad$
(5) How many fewer people chose red than chose blue? $\qquad$

## Test Prep

(6) Jeremy is 14 years old. He is 8 years older than his sister. Which number sentence could NOT be used to find his sister's age?
A. $14-\square=8$
C. $8+\square=14$
B.
$=14-8$
D. $\square=8+14$
(7) The dots form a rectangle. How many dots are hidden?

A. 3
B. 5
C. 6
D. 9

## Introducing Bar Graphs

(1) Which ocean animal was chosen by the most people?

2 Which ocean animal was chosen by 30 people?
(3) How many more people chose whales than chose sharks?
(4) About how many fewer people chose sea turtles than
 chose dolphins?
(5) About how many people are represented by this graph?

## Test Prep

(6) Miko and Dannie made a cake and cut it into 8 equal pieces. They gave 3 pieces to their friends. What fraction of the cake is left?
A. $\frac{1}{5}$
B. $\frac{3}{8}$
C. $\frac{1}{2}$
D. $\frac{5}{8}$
(7) Lara has 3 fruits: an apple, a grapefruit, and a pear. Cliff has 2 fruits: an orange and a banana. How many different combinations of 2 fruits can they make if they use one of Lara's and one of Cliff's?
A. 4
B. 5
C. 6
D. 10

## Exploring Probability

Imagine a bag containing 3 green marbles, 2 blue marbles, and 1 red marble. You reach into the bag without looking and pull out two marbles.

Classify the following events as possible (P) or impossible (I).
(1) The marbles are the same color.
(2) One of the marbles is red.
(3) Both of the marbles are red.
(4) One of the marbles is purple.
(5) You have one green marble and one blue marble.
(6) Are you more likely to pull 2 green marbles or 2 blue marbles? Explain your answer.

## Test Prep

(7) Which statement is true?
A. $3,378<3,291$
B. $17,456<17,299$
C. $99,999<199,000$
D. $1,234>4,321$
(8) Sean's class collected cans of soup to donate. Sean correctly rounded the number of cans to the nearest ten. He said there were about 140 cans. Which is the largest number of cans he could have counted?
A. 134
B. 144
C. 146
D. 147

## Experimenting With Probability

Chandra tossed three coins and recorded the number of heads each time. Here are her results:

2, 1, $0,1,1,3,1,2,2,2,2,1,1,1,1,1,1,3,1,1,0,3,1,2$
(1) Complete the bar graph at right.
2) Which number of heads happened most often?
(3) Which number of heads happened least often?
(4) Which do you think is
 more likely: 2 heads or 3 heads?

## Test Prep

(5) Yvonne buys school supplies for $49 \not \subset$. She pays for them with coins. Explain how Yvonne can be sure to use the fewest possible coins.

## Making and Using a Price Chart


(1) How much would 6 cups of lemonade cost?
2. How many crackers cost as much as 6 cups of lemonade?
(3) What could you buy with exactly a nickel and a dime? $\qquad$
(4) Joanne spent $19 ¢$.

What did she buy?
(5) Felix bought more crackers than cups of lemonade. He spent $40 \not \subset$. What did he buy?

## Test Prep

(6) Marla is guessing a mystery number. Here are the first two clues.

The number is greater than 40 but less than 70.
The sum of the digits is 12 .
List the numbers that could be the mystery number. Then choose one number and write another clue that would make it possible to
guess the mystery number.

## Finding Locations on a Map

The seats in this theater that are already taken are marked with an ' $x$ '.

(1) A family of 5 wants to sit together. Where should they sit?
(2) Next, 4 friends want to sit together.

Where should they sit?
(3) Now, where can 3 people sit together?

4 Dan is going to the show alone.
Where might he sit?

## Test Prep

(5) Harry's spelling book contains 88 pages. Jocelyn's math book contains 203 pages. Which is the correct estimate of how many fewer pages the spelling book has than the math book?
A. Less than 100
C. Between 120 and 140
B. Between 100 and 120
D. More than 140

## Naming Intersections on a Map

## Draw a point at each intersection and label it with the number.

(1) Avenue C and Third Street
2) Avenue H and Third Street
(3) Avenue F and First Street
(4) Avenue E and Fourth Street

(5) Avenue F and Fourth Street
(6) Avenue D and Second Street
(7) Avenue G and Second Street
(8) Avenue E and First Street


## Test Prep

At the stadium, there were 565 tickets sold for Friday night and 631 tickets for Sunday night.
(9) About how many tickets were sold?
A. 1,000
C. 1,300
B. 1,200
D. 1,400
B. 1,200 D. 1,400
(10) The owners of the stadium hoped to sell 2,000 tickets. Which steps would you use to estimate how many more tickets they need to sell to reach their goal?
A. Add, and then subtract.
B. Subtract, and then add.
C. Add, and then add.
D. Add, and then multiply.

## Graphing Solutions to Open Number Sentences

Find all possible whole number solutions.
You may not need all the blanks.
(1) $\square+\Delta=9$

| $\square$ | 0 |  |  | 3 |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $\Delta$ | 9 |  |  |  |  |  |  |  |  | 0 |

(2) $O \times \square=24$

| $\bigcirc$ | 24 | 12 |  |  |  |  | 2 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0 | 1 |  | 3 |  |  |  |  |  |  |  |

(3) $7-\square=\square$

| $\square$ |  |  |  |  |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $\square$ |  |  |  |  |  |  |  |  |  |  |

## Test Prep

(4) What operation makes this number sentence true?
$9-9=81$
A. +
C. $\times$
B. -
D. $\div$
(5) Barry, Carlos, Donna, and Frank live on the same street. Frank lives between Carlos and Barry. Donna lives at one end of the street, and Barry lives beside her. Who lives at the other end of the street?
A. Barry
C. Frank
B. Carlos
D. Cannot tell

