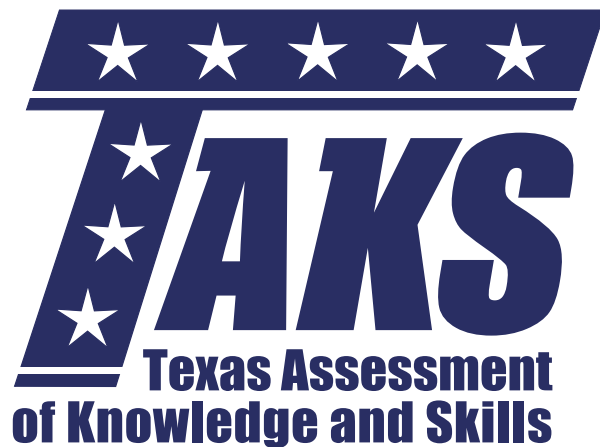


STUDENT NAME \_\_\_\_\_



**GRADE 5  
MATHEMATICS  
READING  
SCIENCE**

**Administered Spring 2004**

# MATHEMATICS

# Mathematics Chart

## LENGTH

### Metric

1 kilometer = 1000 meters

1 meter = 100 centimeters

1 centimeter = 10 millimeters

### Customary

1 mile = 1760 yards

1 mile = 5280 feet

1 yard = 3 feet

1 foot = 12 inches

## CAPACITY AND VOLUME

### Metric

1 liter = 1000 milliliters

### Customary

1 gallon = 4 quarts

1 gallon = 128 ounces

1 quart = 2 pints

1 pint = 2 cups

1 cup = 8 ounces

## MASS AND WEIGHT

### Metric

1 kilogram = 1000 grams

1 gram = 1000 milligrams

### Customary

1 ton = 2000 pounds

1 pound = 16 ounces

## TIME

1 year = 365 days

1 year = 12 months

1 year = 52 weeks

1 week = 7 days

1 day = 24 hours

1 hour = 60 minutes

1 minute = 60 seconds

Metric and customary rulers can be found on the separate Mathematics Chart.

Continued on the next page

# Mathematics Chart

<b>Perimeter</b>	square	$P = 4s$
	rectangle	$P = 2l + 2w$ or $P = 2(l + w)$
<b>Area</b>	square	$A = s^2$
	rectangle	$A = lw$ or $A = bh$
	triangle	$A = \frac{1}{2}bh$ or $A = \frac{bh}{2}$

## DIRECTIONS

Read each question. Then fill in the correct answer on your answer document. If a correct answer is not here, mark the letter for “Not here.”

### SAMPLE A

Which digit is in the thousands place in the number 4,861,392?

- A 6
- B 4
- C 1
- D Not here

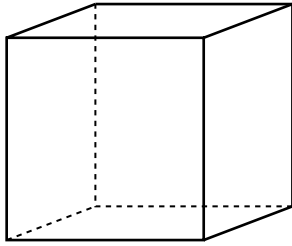
### SAMPLE B

Joey has 8 books. Roberto has twice as many books as Joey has. How many books does Roberto have?

Record your answer and fill in the bubbles on your answer document. Be sure to use the correct place value.



- 1 Look at the figure below.



Which statement about this figure is true?

- A The figure has exactly 6 faces.
- B The figure has exactly 6 edges.
- C The figure has exactly 7 vertices.
- D The figure has no parallel lines.

- 2 A restaurant has 38 tables. Each table can seat 4 people. If every table is full, how many people are seated in the restaurant at the same time?

- F 34
- G 42
- H 122
- J 152

- 3 Jon is 8 years old. His brother Tom is 2 years older than Jon, and their brother Henry is twice as old as Tom. Which number sentence could be used to find  $h$ , Henry's age?

- A  $8 \times 2 = h$
- B  $(8 + 2) \times 2 = h$
- C  $(8 + 2) \div 2 = h$
- D  $8 \times 2 \div 2 = h$

- 4 Lisa has \$5.50 to buy supplies to make a birthday dessert for her mother. She can choose among the supplies listed in the table below. All prices include tax.

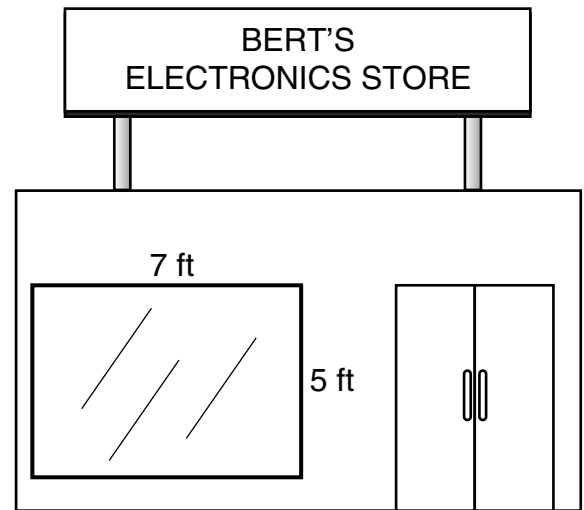
**Birthday Dessert**

Supplies	Price
Cake mix	\$1.89
Frosting	\$2.29
Candles	\$0.99
Brownie mix	\$2.49
Cookie dough	\$1.99
Chocolate chips	\$1.99

Which of the following combinations of supplies does she **NOT** have enough money to buy?

- F** Brownie mix, chocolate chips, and candles
- G** Cookie dough, frosting, and candles
- H** Brownie mix, frosting, and candles
- J** Cake mix, frosting, and candles

- 5 Bert's Electronics Store is having a sale. To advertise the sale, the store manager wants to outline the store window with colorful ribbon.



How many feet of ribbon will be needed to outline the 4 sides of the window?

- A** 35 ft
- B** 24 ft
- C** 19 ft
- D** 17 ft

- 6 Mr. Moore's students raised \$109.57 the first week and \$35.62 the second week of a school project. To determine whether they are halfway to their goal of \$450.00, what should the students do?
- F** Add \$109.57 and \$35.62 and compare the sum to \$450.00 divided by 2
- G** Subtract \$35.62 from \$109.57 and compare the difference to \$450.00 divided by 2
- H** Multiply \$109.57 by \$35.62 and compare the product to \$450.00 divided by 2
- J** Divide \$109.57 by \$35.62 and compare the quotient to \$450.00 divided by 2

7 Which relationship between units of time is correct?

- A** One hour is  $\frac{1}{365}$  of one year.
- B** One year is  $\frac{1}{365}$  of one hour.
- C** One second is  $\frac{1}{60}$  of one minute.
- D** One minute is  $\frac{1}{60}$  of one second.

8 Each week Leanne spends the same amount of money to buy her lunch at school. She keeps a list in her notebook of how much money she has spent on lunches since the school year began. The table shows part of her list.

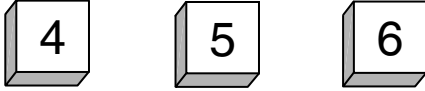
Leanne's Lunches

Week of School	Total Amount Spent
6	\$60
7	\$70
8	\$80
9	\$90

Which is **NOT** a way to find how much money Leanne spends on lunches each week?

- F** Divide \$90 by 9
- G** Divide \$60 by 6
- H** Subtract \$60 from \$90
- J** Subtract \$70 from \$80

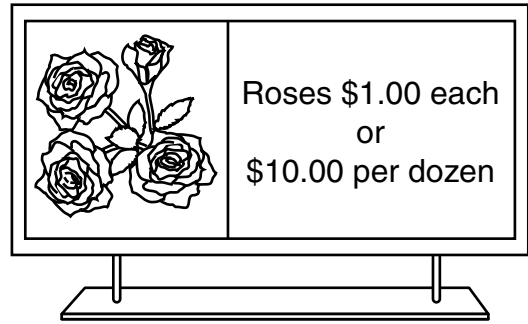
- 9 Yushiqua rolled 3 fair number cubes, and the numbers shown below came out on top.



If each number is used only once, which group shows all the 3-digit numbers that can be made with these digits?

- A 456, 565, 654
  - B 456, 546, 654, 645
  - C 456, 465, 564, 654, 546
  - D 456, 465, 564, 546, 645, 654
- 10 Carrie has 300 coins in her collection. She has 125 more coins than Michael and 50 fewer coins than Sara. How many coins does Michael have?
- F 175
  - G 250
  - H 350
  - J 475

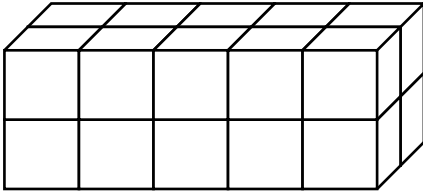
- 11 A florist posted the sign below in his store window.



Sharla's mother needs to buy 3 dozen roses for Sharla's sister's wedding. According to the sign, how much will she save by buying the roses by the dozen instead of individually?

- A \$10.00
- B \$8.00
- C \$6.00
- D \$5.00

- 12 A rectangular prism made of 1-centimeter cubes is shown below.



What is the volume of this rectangular prism?

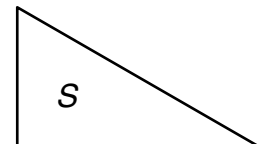
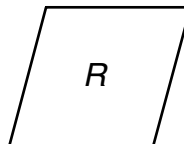
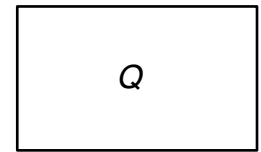
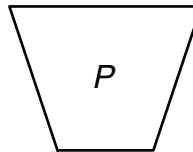
- F**  $4 \text{ cm}^3$   
**G**  $9 \text{ cm}^3$   
**H**  $10 \text{ cm}^3$   
**J**  $20 \text{ cm}^3$
- 13 Clyde and Anita were making barbecue sauce. Clyde's recipe called for  $\frac{1}{2}$  cup of honey, and Anita's recipe called for  $\frac{3}{16}$  cup of honey. Which shows the correct relationship between these fractions?

- A**  $\frac{1}{2} > \frac{3}{16}$   
**B**  $\frac{1}{2} = \frac{3}{16}$   
**C**  $\frac{3}{8} > \frac{1}{4}$   
**D**  $\frac{1}{2} < \frac{3}{16}$

- 14 The Milky Way galaxy has about 200,000,000,000 stars. How is this number written in words?

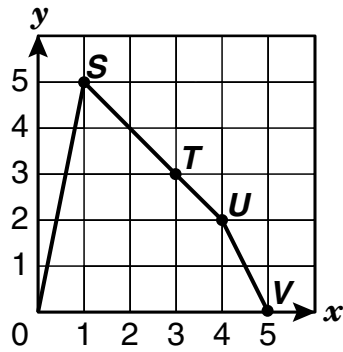
- F** Two hundred thousand  
**G** Two hundred million  
**H** Two hundred billion  
**J** Two hundred trillion

- 15 Which statement about the figures shown below is true?



- A** Figures *R* and *S* are congruent.  
**B** Figures *Q* and *S* each have parallel sides.  
**C** Figures *P* and *R* each have at least 2 obtuse angles.  
**D** Figures *S* and *P* each have all acute angles.

16 The graph shows a figure with 4 points labeled.



Which table shows the coordinates of these 4 points?

**F**

Point	<i>S</i>	<i>T</i>	<i>U</i>	<i>V</i>
<i>x</i>	1	3	4	5
<i>y</i>	5	3	2	1

**G**

Point	<i>S</i>	<i>T</i>	<i>U</i>	<i>V</i>
<i>x</i>	5	3	2	0
<i>y</i>	1	3	4	5

**H**

Point	<i>S</i>	<i>T</i>	<i>U</i>	<i>V</i>
<i>x</i>	5	3	2	0
<i>y</i>	1	3	2	0

**J**

Point	<i>S</i>	<i>T</i>	<i>U</i>	<i>V</i>
<i>x</i>	1	3	4	5
<i>y</i>	5	3	2	0

- 17 Look for the pattern in the sequences of numbers below.

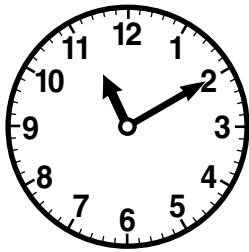
2, 4, 6, 8, 10

7, 14, 21, 28, 35

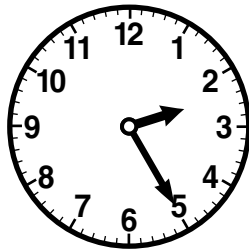
11, 22, 33, 44, 55

Each sequence is an example of which kind of numbers?

- A Even numbers
  - B Multiples
  - C Primes
  - D Odd numbers
- 18 Jesse's father ran a race from 11:10 A.M. to 2:25 P.M., as shown on the clocks below.



Start

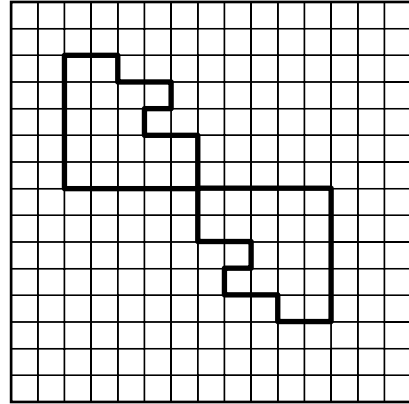


Finish

For how many hours and minutes did Jesse's father run?

- F 3 h 5 min
- G 3 h 10 min
- H 3 h 15 min
- J 3 h 20 min

- 19 Which transformation is represented in the diagram?



- A Reflection
- B Translation
- C Rotation
- D Not here

- 20 The table below shows the populations of 5 different cities.

City Populations

City	Population
Seaside	50,235
Oceanside	45,006
Lakeside	71,213
Mountainside	67,250
Riverside	32,701

Which city in the table represents the median population?

- F Seaside
- G Oceanside
- H Mountainside
- J Riverside

- 21 Bart's drama club put on a play. There were 843 people in the audience. Each ticket to the play cost \$8. The audience was seated in 3 sections. If each section had the same number of people in it, how many people were in each section?

Record your answer and fill in the bubbles on your answer document. Be sure to use the correct place value.

**22** Mr. LaSalle is buying ice-cream bars for the 8 dozen fifth graders at his school. The ice-cream bars are packaged 10 to a box. What is the least number of boxes he can buy so that each fifth grader gets at least 1 ice-cream bar?

**F** 12

**G** 10

**H** 9

**J** 8

**23** Erin's brother weighed 6 pounds 5 ounces when he was born. How many ounces did her brother weigh when he was born?

**A** 5 oz

**B** 96 oz

**C** 101 oz

**D** 176 oz

**24** A basketball team scored 48 baskets in 1 game. Each basket was worth one or two points. If the team scored 84 points, how many one-point baskets and two-point baskets did it score?

**F** 6 one-point baskets, 42 two-point baskets

**G** 12 one-point baskets, 36 two-point baskets

**H** 16 one-point baskets, 32 two-point baskets

**J** 20 one-point baskets, 32 two-point baskets

**25** Marcie has 11 letter cards that spell the word *MISSISSIPPI* when put together. If she picks 1 card without looking, what is the probability that it will have the letter *S* on it?

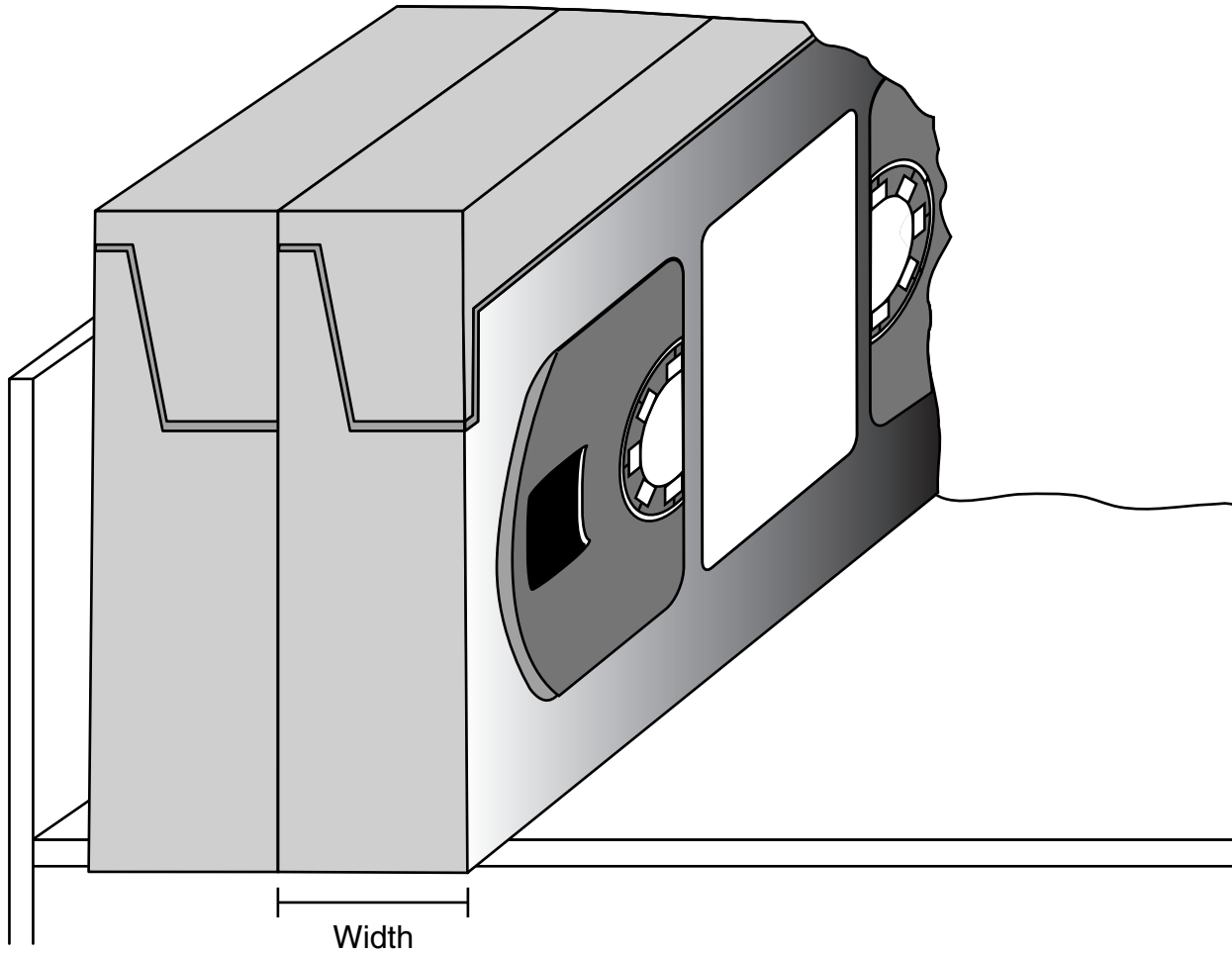
**A**  $\frac{4}{7}$

**B**  $\frac{3}{7}$

**C**  $\frac{4}{11}$

**D**  $\frac{7}{11}$

- 26 Stella stores videotapes side by side on a shelf, as shown below. Use the ruler on the Mathematics Chart to measure the width in inches of one videotape.



If the shelf is 3 feet long, what is the greatest number of videotapes that Stella can store on the shelf?

- F** 12
- G** 24
- H** 36
- J** 48

- 27 The list below contains the 8 factors of which number?

2, 18, 9, 54, 6, 27, 3, 1

- A 18
- B 24
- C 54
- D 27

- 28 The table shows the results of 18 spins Jules made with a spinner.

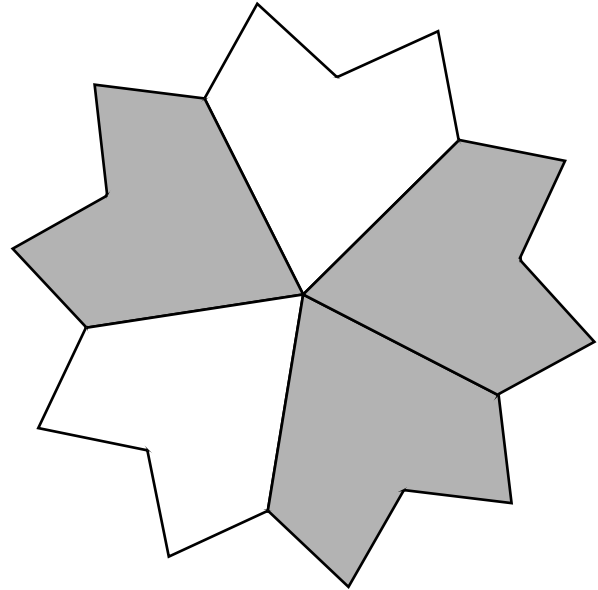
Spinner Results

Fruit	Number of Spins
Grape	5
Apple	4
Orange	6
Pear	3

Based on these results, what is the probability that Jules's spinner will land on the apple on his next spin?

- F  $\frac{2}{9}$
- G  $\frac{1}{4}$
- H  $\frac{2}{7}$
- J  $\frac{1}{3}$

- 29 Alma shaded  $\frac{3}{5}$  of her design.



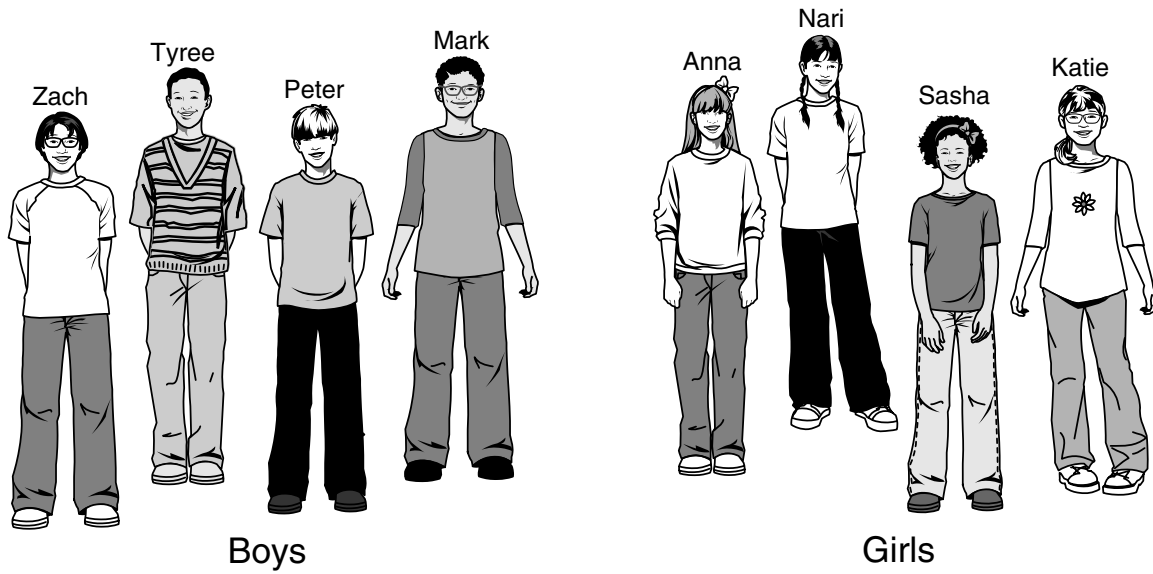
Which decimal number represents the shaded part of her design?

- A 0.6
  - B 0.06
  - C 0.006
  - D 0.0006
- 30 Which shape could never have parallel sides?

- F Rhombus
- G Triangle
- H Octagon
- J Pentagon

- 31 The fractions  $\frac{2}{4}$ ,  $\frac{3}{6}$ ,  $\frac{4}{8}$ , and  $\frac{5}{10}$  are each equivalent to  $\frac{1}{2}$ . What is the relationship between the numerator and denominator in each fraction that is equivalent to  $\frac{1}{2}$ ?
- A The numerator is twice the denominator.
  - B The denominator is twice the numerator.
  - C The numerator is 2 more than the denominator.
  - D The denominator is 2 more than the numerator.

- 32 Ally has to choose teams of 2 people for a game. Each team must have 1 boy and 1 girl on it. The people from whom Ally can choose are shown below.



How many different team combinations are possible using these boys and girls?

- F 16
- G 8
- H 12
- J 4

- 33 Which of the following numbers is less than 6.001?

- A 6.011
- B 6.0
- C 6.101
- D 6.1

34 Vanessa poured 250 milliliters of water into a flowerpot. What fractional part of a liter is 250 milliliters?

F  $\frac{1}{2}$

G  $\frac{1}{3}$

H  $\frac{1}{4}$

J  $\frac{1}{25}$

35 Which group shows all the numbers that are common factors of 36 and 48?

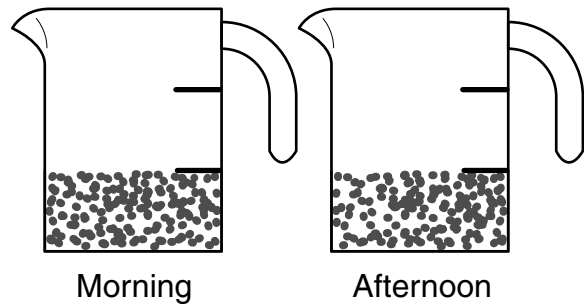
A 1, 2, 3, 4, 6

B 1, 2, 3, 4, 6, 12

C 1, 2, 3, 4, 6, 9, 12, 18

D 1, 2, 3, 4, 6, 8, 12, 16, 24

36 Pat gives his pet rabbit  $\frac{1}{3}$  cup of dry food in the morning and  $\frac{1}{3}$  cup of dry food in the afternoon, as shown in the measuring cups below.



How much dry food does he give his rabbit each day?

F  $\frac{1}{3}$  c

G  $\frac{2}{3}$  c

H  $\frac{1}{2}$  c

J 1 c

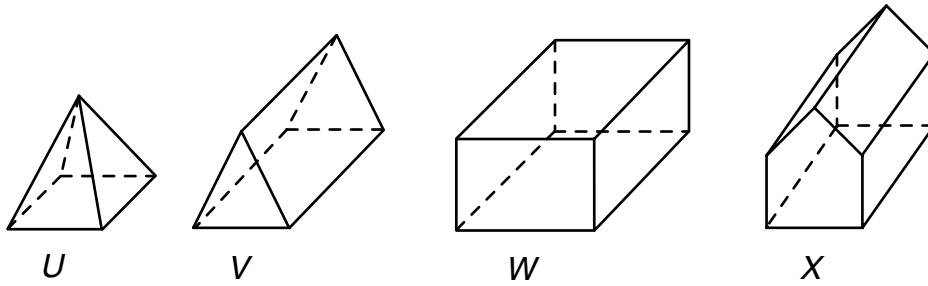
**37** A track team ran 4 miles in 36 minutes. Which shows how to find the number of minutes it would take the track team to run 20 miles?

- A**  $36 \div 4 = 9$ , so  $9 \times 20 = 180$  minutes
- B**  $4 \times 9 = 36$ , so  $9 \times 36 = 324$  minutes
- C**  $36 \div 4 = 9$ , so  $4 \times 36 = 144$  minutes
- D**  $4 \times 5 = 20$ , so  $5 \times 20 = 100$  minutes

**38** A school basketball team won 8 of the 20 games it played. What fraction of its games did the team win?

- F**  $\frac{1}{28}$
- G**  $\frac{1}{12}$
- H**  $\frac{2}{5}$
- J**  $\frac{5}{2}$

39 Which figure below has 10 vertices?



- A Figure *U*
- B Figure *V*
- C Figure *W*
- D Figure *X*

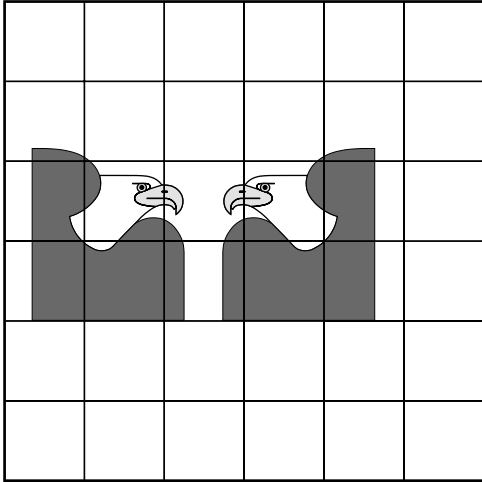
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40 Juan bought 4 packets of notebook paper for school last year. Each packet contained 500 sheets of paper. He used about 20 sheets of paper each week. What information is needed to find the approximate number of sheets of paper Juan had left after the school year was over?

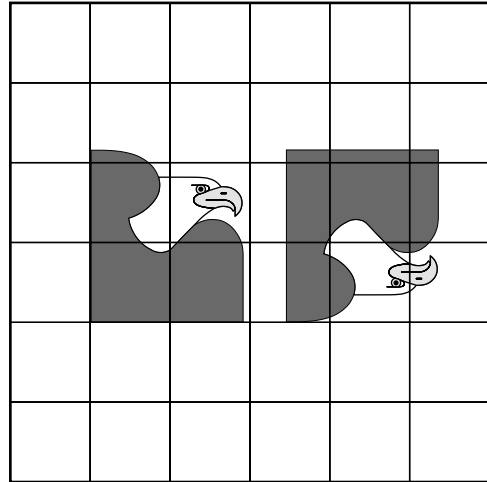
- F The number of hours Juan did homework every day
- G The number of classes Juan had
- H The number of students in Juan's grade
- J The number of weeks in the school year

41 Which pair of eagle pictures shows a translation?

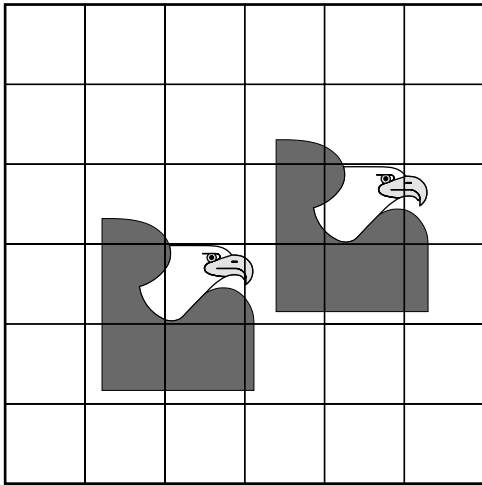
A



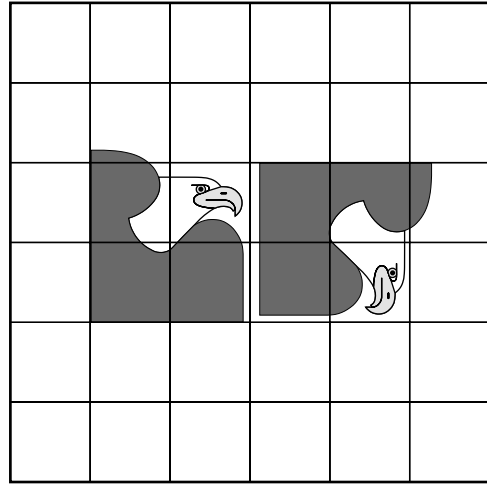
C



B



D



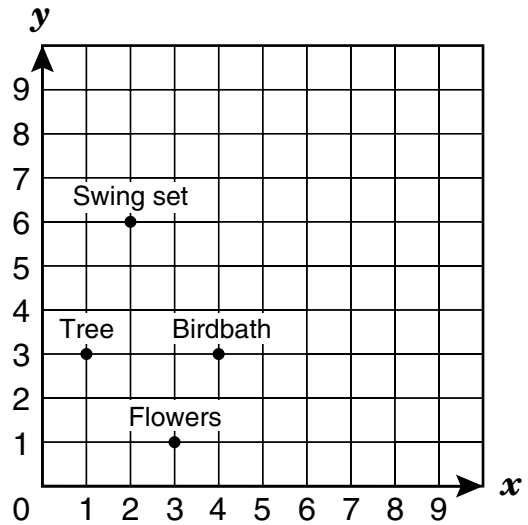
42 A parking lot has 6 rows, with 24 spaces in each row. If 83 spaces are occupied, which of the following shows a way to find the number of empty spaces in the parking lot?

- F Add 24 to the product of 83 and 6
- G Add 83 to the product of 24 and 6
- H Subtract 24 from the product of 83 and 6
- J Subtract 83 from the product of 24 and 6

43 Mr. Lyons bought a computer that was on sale for \$816. The regular price of the computer was \$1,395. Which is the best estimate of the amount of money Mr. Lyons saved by buying the computer on sale?

- A \$500
- B \$600
- C \$1,400
- D \$2,200

44 Jordan made the grid below to show the location of some things in his yard.



Which ordered pair best represents the point on the grid labeled “Tree”?

- F (2, 6)
- G (3, 1)
- H (1, 3)
- J (4, 3)

BE SURE YOU HAVE RECORDED ALL OF YOUR ANSWERS  
ON THE ANSWER DOCUMENT.

