

 SCHOLASTIC

Join me inside
for a math
adventure!



Must-Know Math™



25



Activities

to Build

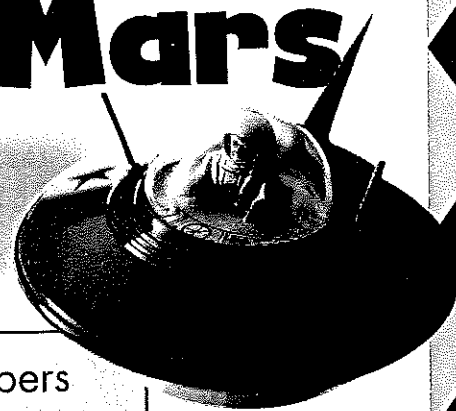
Key Skills

in 3rd Grade



Earth Versus Mars

Write the expanded notation for each fact about Earth and Mars. We did the first one for you.



Standard notation is the way we usually see numbers written out. For example: **43,624**.

Expanded notation shows a number as an addition problem. To write a number in expanded notation, use place value to show each digit's value. For example, the expanded notation of 43,624 is **40,000 + 3,000 + 600 + 20 + 4**.

1 Coldest temperature recorded (in degrees Fahrenheit)

Earth: 129 below 0 100 + 20 + 9 below 0

Mars: 200 below 0 _____ below 0

2 Length of largest canyon (in miles)

Earth (The Grand Canyon): 277 _____

Mars (Valles Marineris): 2,500 _____

3 Distance across, through center (in miles)

Earth: 7,926 _____

Mars: 4,220 _____

4 Highest mountain (in feet)

Earth (Mount Everest): 29,035 _____

Mars (Olympus Mons): 69,800 _____



Solve this riddle to find my name:
You will always use this digit when you're
writing expanded notation. Got it? Then
you've got my name: Zero!

Math for Your Funny Bone

Round each number to the place we ask for. Find the answer in the bank and circle the word next to it. Then write the circled word in the correct blank at the bottom of the page. (We did the first one for you.) You'll solve Zero's riddle!



Why didn't the skeleton go to the dance?

1 Round **45** to the **tens** place.

2 Round **34,872** to the **thousands** place.

3 Round **540** to the **hundreds** place.

4 Round **23,112** to the **ten thousands** place.

5 Round **675** to the **tens** place.

6 Round **245** to the **hundreds** place.

7 Round **77,231** to the **ten thousands** place.

8 Round **6,499** to the **thousands** place.

ANSWER BANK

680	to
23,110	singing
500	body
35,000	had
240	dog
80,000	Because
50	<u>with</u>
34,900	forever
400	funny
20,000	he
6,000	no
200	go

#7

#4

#2

#3

with

#3

#5

#5

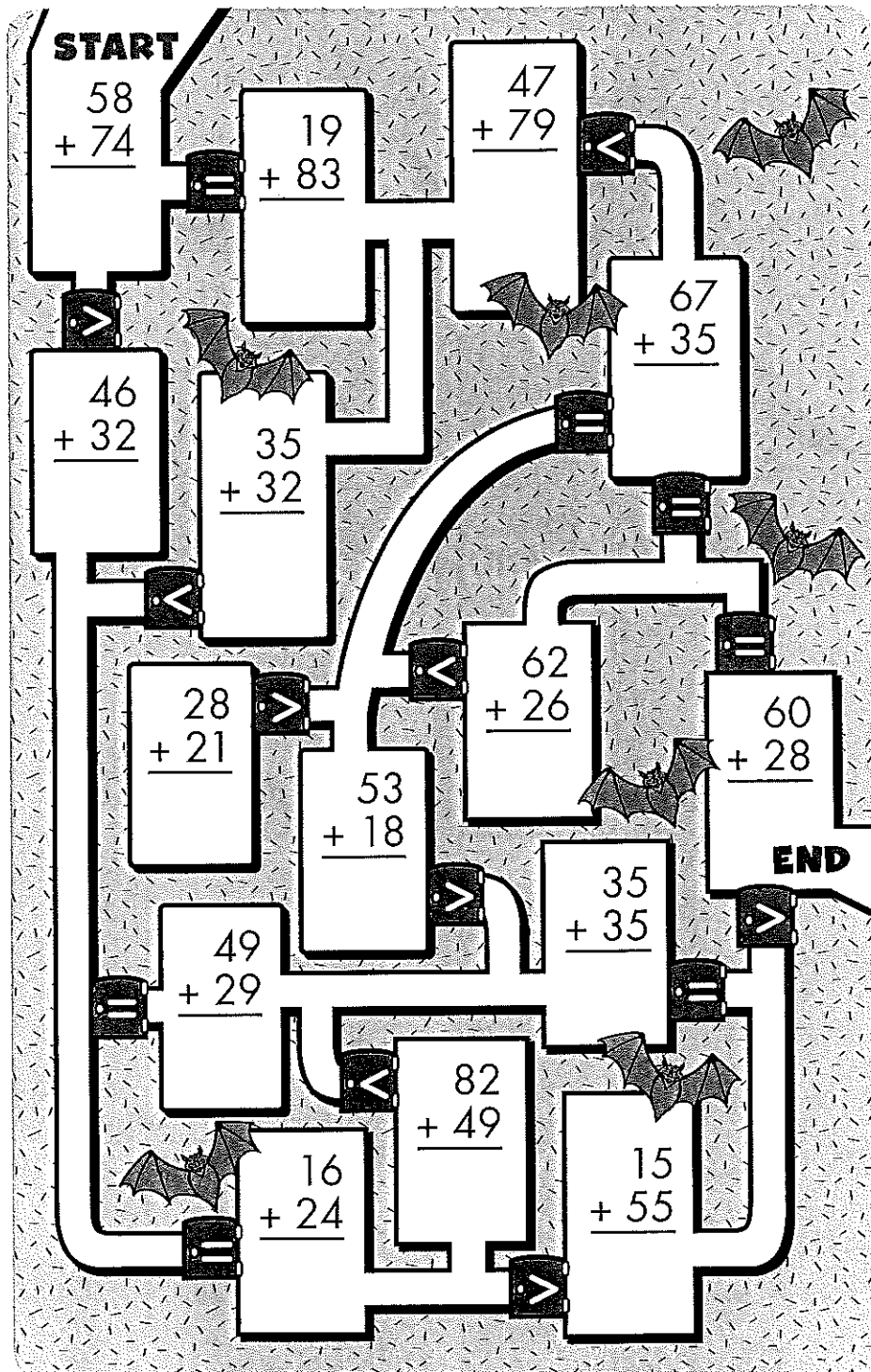
#1

Scary Math

You're in a haunted house, and you want to get out! First, find the sums in every room in the house. Then follow the rules to find your way through the maze.

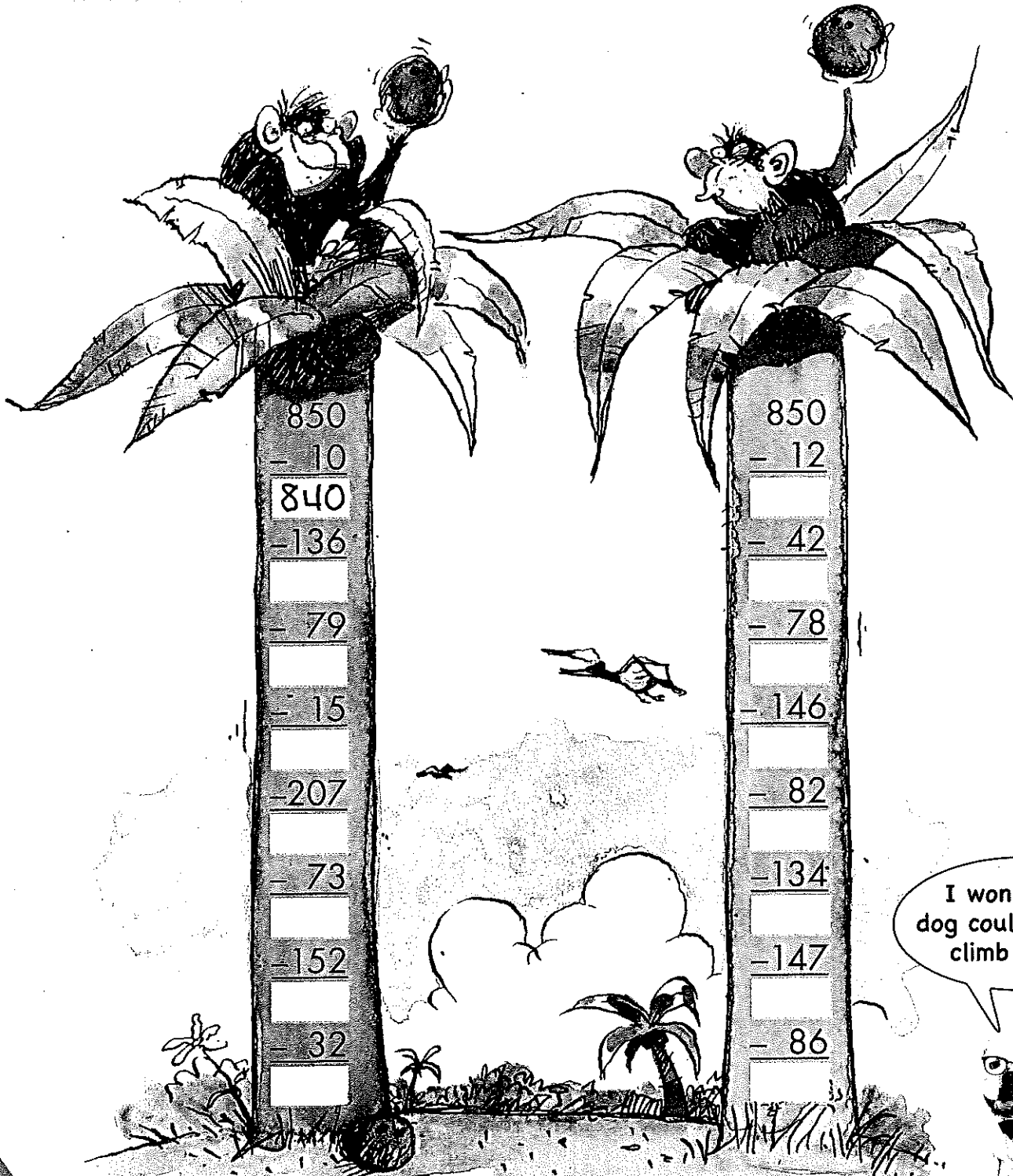
House Rules:

1. You may only enter a room through a red door.
2. You may only pass through a red door that shows the correct relationship between the room you just left and the room you are about to enter. For example: You leave a room where the sum is **46**. You come to a room where the sum is **95**. You can enter only if the sign on the door is $<$, because $46 < 95$.
3. Go ahead and scream—no one can hear you!



Monkey Business

These monkeys are racing to see who can carry a coconut down the tree first. Subtract to find the differences. (We got you started.) The monkey that finishes with the lowest number wins!



850
 - 10
 840
 - 136

 - 79

 - 15

 - 207

 - 73

 - 152

 - 32

850
 - 12

 - 42

 - 78

 - 146

 - 82

 - 134

 - 147

 - 86

I wonder if a dog could learn to climb a tree.

Circle the monkey that won!

Body Math

Find the differences. The answers will complete the sentences and tell you some cool facts about the human body.

$$\begin{array}{r} 267 \\ -187 \\ \hline \end{array}$$

1 About _____ hairs fall out of your head every day.

$$\begin{array}{r} 50 \\ -25 \\ \hline \end{array}$$

2 An adult's intestines are at least _____ feet long.

$$\begin{array}{r} 537 \\ -527 \\ \hline \end{array}$$

3 Humans blink about _____ times a minute.

$$\begin{array}{r} 724 \\ -124 \\ \hline \end{array}$$

4 The body has more than _____ muscles.

$$\begin{array}{r} 883 \\ -293 \\ \hline \end{array}$$

5 The average person's hair will grow about _____ inches in a lifetime.

$$\begin{array}{r} 254 \\ -48 \\ \hline \end{array}$$

6 The skeleton is made of _____ bones.

$$\begin{array}{r} 92 \\ -52 \\ \hline \end{array}$$

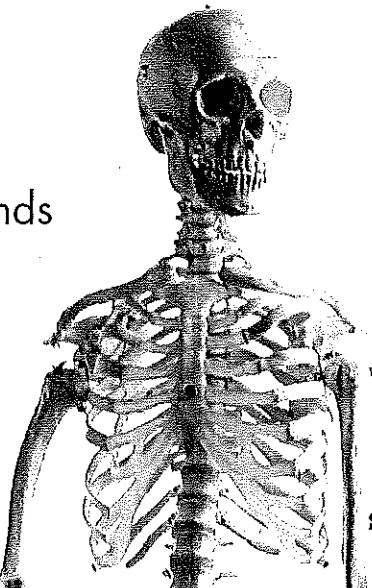
7 You are likely to shed about _____ pounds of skin in a lifetime.

$$\begin{array}{r} 121 \\ -89 \\ \hline \end{array}$$

Adult humans have _____ teeth.

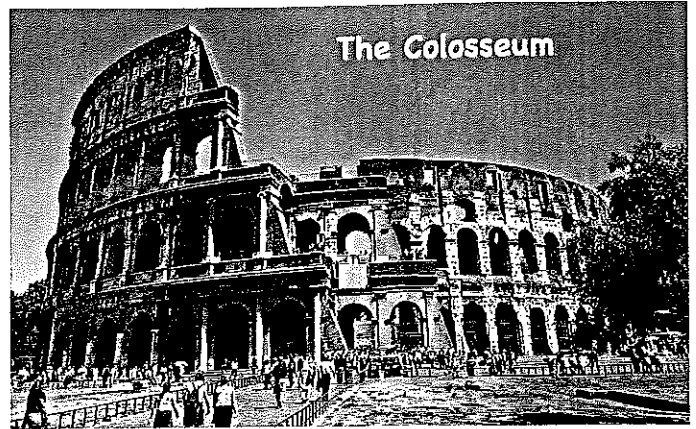
$$\begin{array}{r} 103 \\ -61 \\ \hline \end{array}$$

Dogs have _____!



Number Wonders

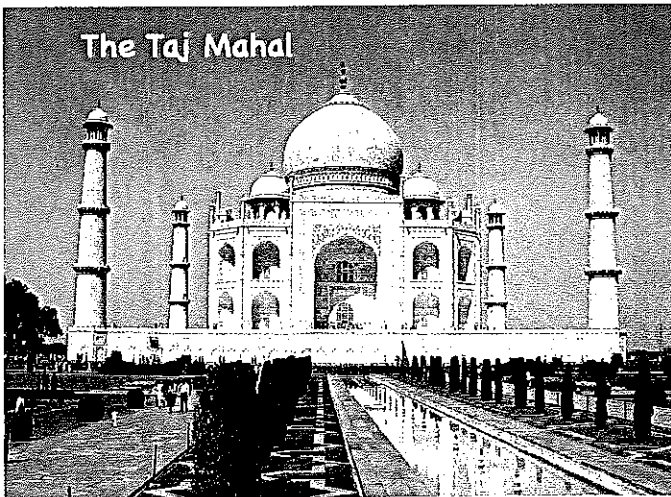
Carl and his family are going on a trip around the world! They're leaving their home in New York City and are visiting the Seven New Wonders of the World. The map shows the approximate distances between their stops. Use it to answer the questions. You'll need a separate sheet of paper to do your work.



The Colosseum

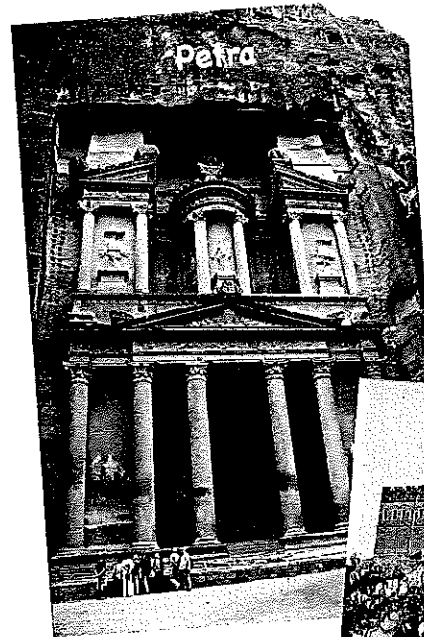
3 How many miles longer is the longest leg (section) of the trip than the shortest leg of the trip? _____

1 How many miles is it from New York City to the first stop on the trip, the Colosseum? _____

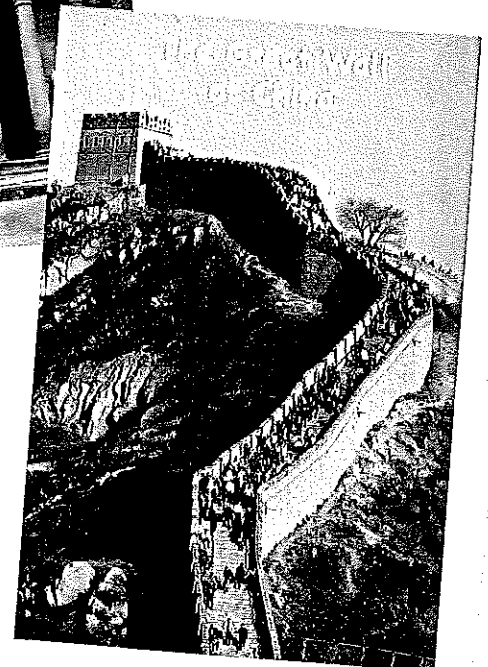


The Taj Mahal

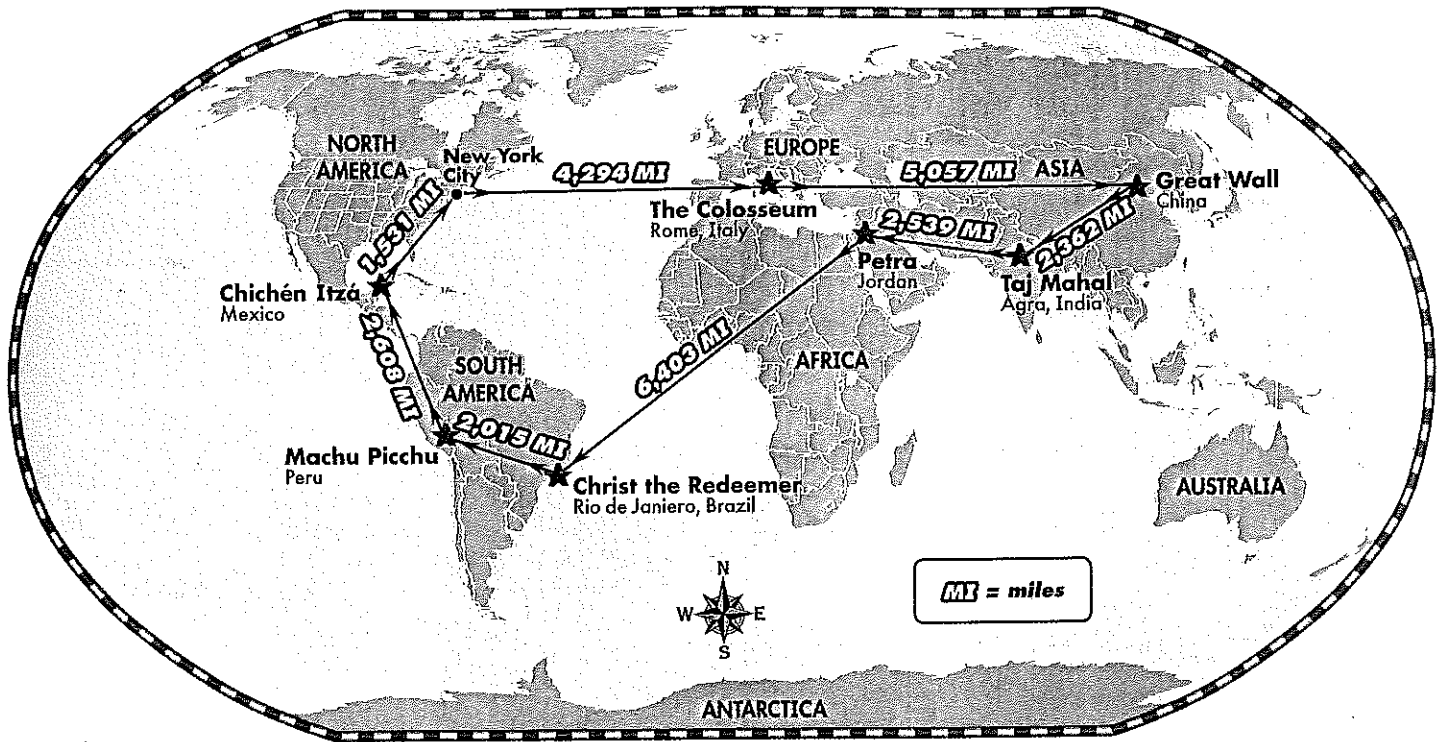
2 When Carl and his family arrive at the Taj Mahal, how many miles have they traveled altogether since leaving New York? _____



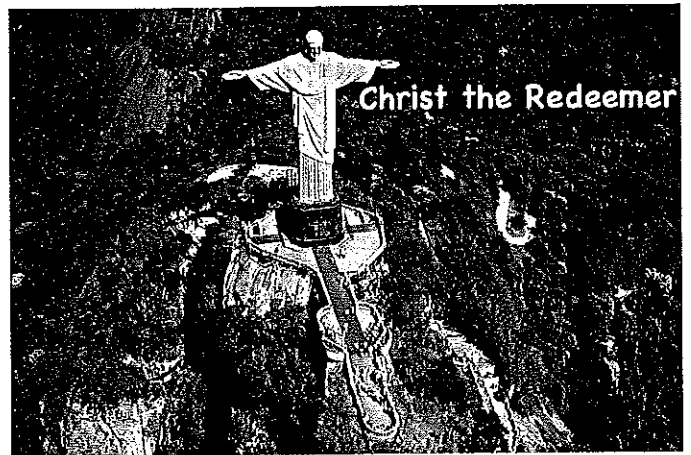
Petra



Great Wall of China



4 During their visit to the Christ the Redeemer statue, Carl's family made a few side trips in a car. The first day they drove 45 miles. The second day they drove 23 miles. The third day they drove 104 miles. How many miles did they drive altogether? _____



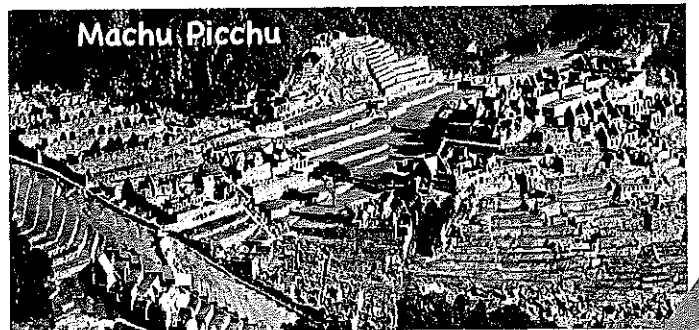
Christ the Redeemer



Chichén Itzá

5 How many miles is it altogether to go from Christ the Redeemer to Machu Picchu, and then to Chichén Itzá, and then home to New York City? _____

6 Carl and his family are on their way back to New York from visiting Chichén Itzá. They have flown 754 miles. How many miles do they have left to go? _____



Machu Picchu

Square Off

Find the sums. Use the coordinates to copy your answers into the grid. (We did coordinate C1 for you.) Then study the grid. Find the pattern and fill in the missing numbers.

C1
$$\begin{array}{r} 237 \\ 78 \\ + 64 \\ \hline 379 \end{array}$$

D2
$$\begin{array}{r} 353 \\ + 41 \\ \hline \end{array}$$

A2
$$\begin{array}{r} 1,087 \\ - 729 \\ \hline \end{array}$$

D3
$$\begin{array}{r} 64 \\ 182 \\ + 151 \\ \hline \end{array}$$

C2
$$\begin{array}{r} 3,620 \\ - 3,238 \\ \hline \end{array}$$

A1
$$\begin{array}{r} 235 \\ 45 \\ + 75 \\ \hline \end{array}$$

B3
$$\begin{array}{r} 321 \\ + 52 \\ \hline \end{array}$$

A4
$$\begin{array}{r} 7,119 \\ - 6,755 \\ \hline \end{array}$$

B1
$$\begin{array}{r} 157 \\ 155 \\ + 55 \\ \hline \end{array}$$

D4
$$\begin{array}{r} 9,200 \\ - 8,800 \\ \hline \end{array}$$

B4
$$\begin{array}{r} 588 \\ - 212 \\ \hline \end{array}$$

	1	2	3	4
A				
B				
C	379			
D				

What pattern did you find?
Explain it here.

This page makes me "grid" from ear to ear!



Drugstore Drop-In

For each problem, circle the change you would get back.
 (You'll need a separate sheet of paper to do your work.)
 Happy shopping!

PRICES

- paint box: \$2.80
- play putty: \$1.27
- magazine: \$3.99
- bar of soap: \$1.85
- lip balm: \$1.39
- umbrella: \$9.99
- toothbrush: \$1.50



- 1** You buy: a paint box and a toothbrush
 You pay: \$5.00
 Your change:



- 2** You buy: a magazine and play putty
 You pay: \$5.50
 Your change:



- 3** You buy: an umbrella and a toothbrush
 You pay: \$12.00
 Your change:



- 4** You buy: a bar of soap and lip balm
 You pay: \$5.00
 Your change:



You have \$3.20.
 If you buy a bar of soap,
 what else could you buy?



Deal or No Deal?

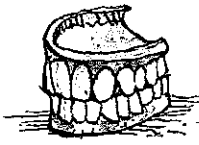
Jack's Trick Shop is full of special offers. But are they all good deals? Or is the store just trying to trick you into buying more? Decide whether or not each of the offers below is really a deal. If it is, circle DEAL. If not, circle NO DEAL. Do your work on a separate sheet of paper.

1 Caveman Teeth

2 for \$16 or \$8.50 each

DEAL

NO DEAL

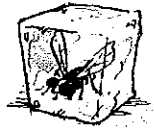


2 Bug in Ice Cube

2 for \$3.00 or \$1.50 each

DEAL

NO DEAL



3 Rubber Nail

3 for \$.25 or \$.10 each

DEAL

NO DEAL



4 Disappearing Ink

3 for \$4.00 or \$1.40 each

DEAL

NO DEAL



5 Fake Vomit

2 for \$8.50 or \$4.25 each

DEAL

NO DEAL



Is It a Deal?

To figure out if an offer is a deal, multiply the regular price of one item (the price "each") by the number of items you must buy to get the special price. Compare that price with the price of the special offer. If the special price is lower, it's a deal. If not, it's NO DEAL! For example: The offer is 2 for \$5 or \$3 each. **Think:** $2 \times \$3 = \6 and \$5 is less than \$6, so it's a deal.

6 Relighting Birthday Candles

3 for \$3.50 or \$1.30 each

DEAL

NO DEAL



If you buy a bug in ice and fake vomit together, there's a special price of \$5.00. How much do you save by buying them together?



Time to Cook!

You are cooking dinner for your friends. You need to plan your time carefully to make sure everything is ready at the right time! Answer the questions below. **Your guests are arriving at 7:00 p.m. Time to get started!**

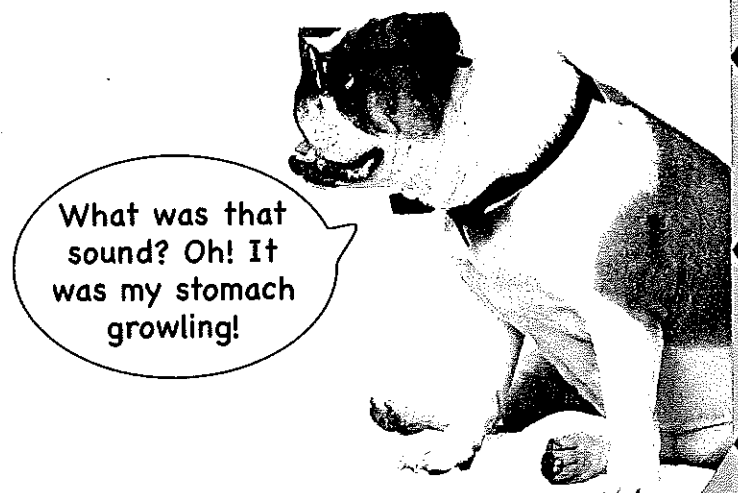


1 You arrive at Mega SuperMart at 10:37 a.m. and shop for 23 minutes. **What time do you finish shopping?** _____

2 The Chocolate Dream Cake you are making for dessert needs to bake for 30 minutes. To give it time to cool before you frost it, you want to take it out of the oven at least 4 hours before your guests arrive. **By what time do you need to put the cake in the oven?** _____

3 You are serving eggplant spread as an appetizer. It takes 15 minutes to prepare and 40 minutes to cook. You want it to be ready just as your guests are arriving. **What time do you need to start preparing it?** _____

4 You put your spinach lasagna in the oven at 6:30 p.m. It needs to bake for 45 minutes. Ten minutes before it's done, you want to put your garlic bread in the oven too. **What time do you need to put the bread in the oven?** _____



Movie Time!

Use the schedule for the Superduperplex movie theater to answer the questions.

GALAXY GHOST IV: THE FINAL RETURN OF THE LAST WARRIOR

11:00 a.m. / 1:15 p.m. / 3:30 p.m. /
5:45 p.m. / 8:00 p.m. / 10:20 p.m.

SUPER FUZZY SMILEY PUPPY AND FRIENDS GO CAMPING

11:00 a.m. / 1:15 p.m. / 3:30 p.m. /
5:45 p.m. / 8:00 p.m.

PIRATES OF THE EAST RIVER III: UNDER THE BRIDGE

11:30 a.m. / 2:15 p.m. / 5:00 p.m. /
7:55 p.m. / 10:45 p.m.


THE ADVENTURES OF BLUNDER AND BOB

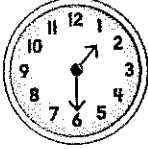
12:00 p.m. / 2:35 p.m. / 5:15 p.m. /
8:00 p.m. / 10:35 p.m.

1 What time is the last show of *Pirates of the East River III* scheduled to start? _____

2 Which movie has a showing scheduled to start at 5:15 p.m.?

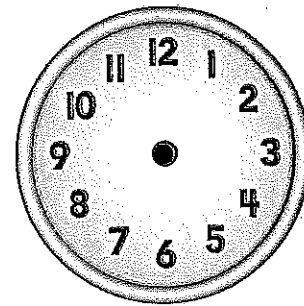
3 How many showings of *Galaxy Ghost IV* are there in all?

4 The clock in the theater lobby shows . How long must you wait before the next showing of *Galaxy Ghost IV* begins?

5 Your dance lesson ends at . It will take you 20 minutes to get to the theater. What is the first movie you can arrive in time to see?

6 Your whole family goes to the theater together. Your mom and your brother go to the 2:15 p.m. showing of *Pirates of the East River III*. You and your dad want to see *The Adventures of Blunder and Bob*. How long must you and your dad wait for the next showing to begin?

7 The theater shows 15 minutes of commercials and previews at each movie's scheduled start time. *Super Fuzzy Smiley Puppy and Friends Go Camping* is 85 minutes long, not counting the commercials and previews. Draw the hands on the clock to show what time the 5:45 showing will be over.



Roadside America

Do the multiplication problems. Then find the products on the map to learn the location of each wacky roadside attraction. Write the location in the space provided. We did the first one for you.

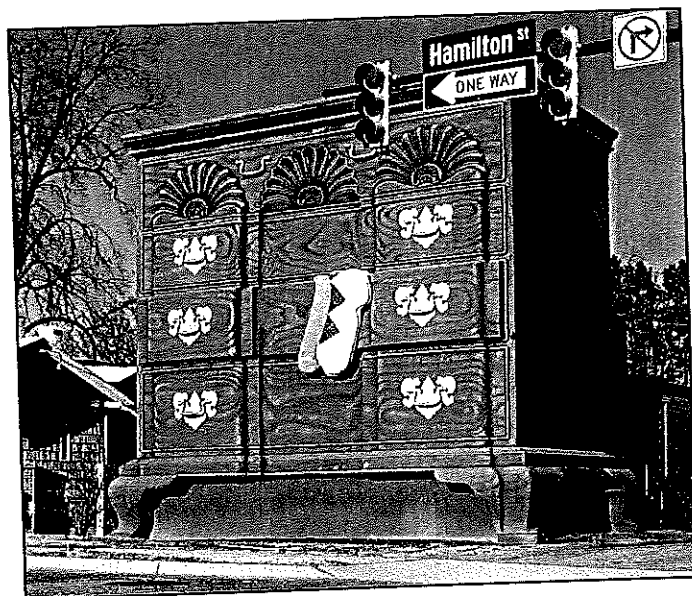
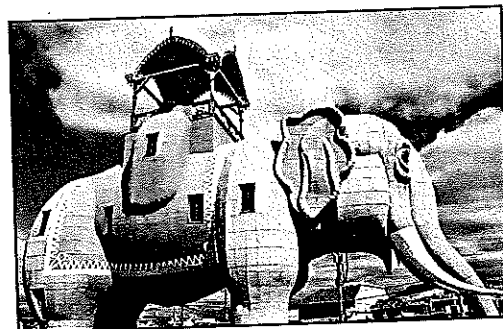
Save this page for your next family vacation!



1 Lucy the Elephant: Since the 1800s when she was built, Lucy has been "the only elephant you can go into and come out of alive."

$$\begin{array}{r} 56 \\ \times 4 \\ \hline 224 \end{array}$$

Location: Margate, NJ



2 Giant Dresser: This 20-foot-tall chest of drawers lets visitors know that they've arrived in the "Home Furnishings Capital of the World."

$$\begin{array}{r} 483 \\ \times 5 \\ \hline \end{array}$$

Location: _____

3 Wonderworks Upside-Down Building:

Inside this upside-down building is a science museum with games and exhibits for both kids and adults.

$$\begin{array}{r} 81 \\ \times 2 \\ \hline \end{array}$$

Location: _____



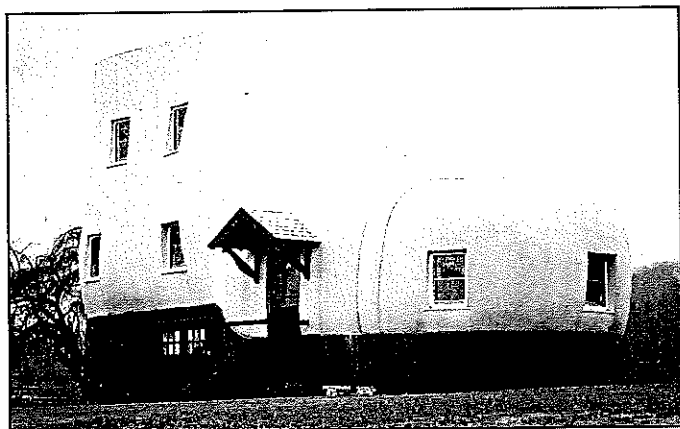
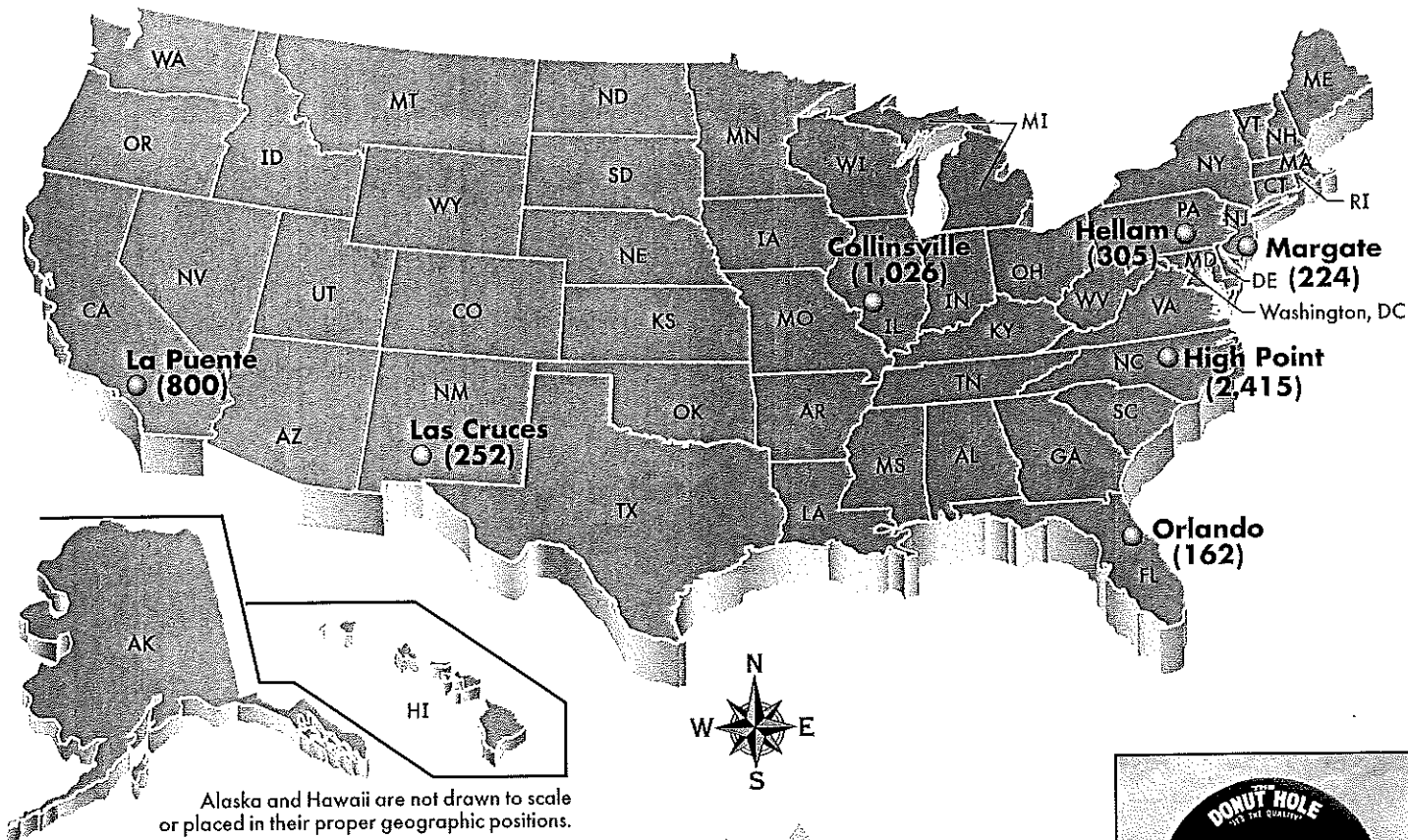
4 World's Largest Catsup Bottle:

This water tower is painted to look like a bottle of Brooks Tangy Catsup. It could hold up to 640,000 regular bottles of catsup!

$$\begin{array}{r} 342 \\ \times 3 \\ \hline \end{array}$$

Location: _____





5 The Shoe House: In 1948, a shoe-store owner asked an architect to build him a house shaped like a work boot. He figured it would catch people's attention. Today, the Shoe House is open for tours and ice cream.

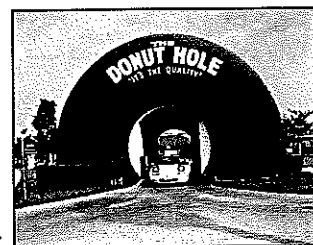
$$\begin{array}{r} 61 \\ \times 5 \\ \hline \end{array}$$

Location: _____

6

The Donut Hole:

Hungry? This drive-through donut shop has a giant donut at each end (both chocolate).



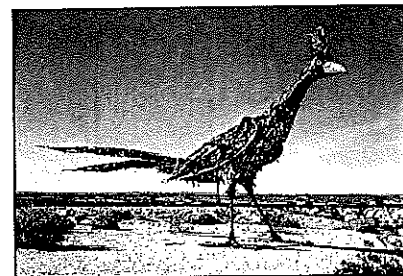
$$\begin{array}{r} 100 \\ \times 8 \\ \hline \end{array}$$

Location: _____

7

Giant Roadrunner:

Located at a rest stop, this 20-foot-tall, 42-foot-long roadrunner is made entirely from trash!



$$\begin{array}{r} 36 \\ \times 7 \\ \hline \end{array}$$

Location: _____

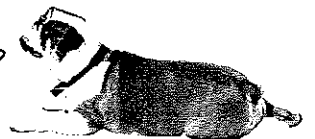
Grant the Ant

Grant's Aunt Nancy gave him a challenge: to use multiplication to make his way through the ant colony. Can you help him? Find the product in each room, then pass through the tunnel with the correct answer.

START

8 X 6	42	2 X 8	16	6 X 7	25	END
48		18		42		21
5 X 7	35	6 X 3	15	5 X 4	15	3 X 7
16		21		20		49
7 X 2	72	8 X 9	76	3 X 4	42	7 X 7
14		28		12		8
5 X 6	35	4 X 7	15	3 X 5	18	1 X 8
30		7		56		6
4 X 9	42	0 X 7	0	9 X 9	72	2 X 3
36		36		81		27
7 X 8	56	6 X 6	35	3 X 7	21	9 X 3

Take your time—
don't get antsy!



Fair Share for Fido

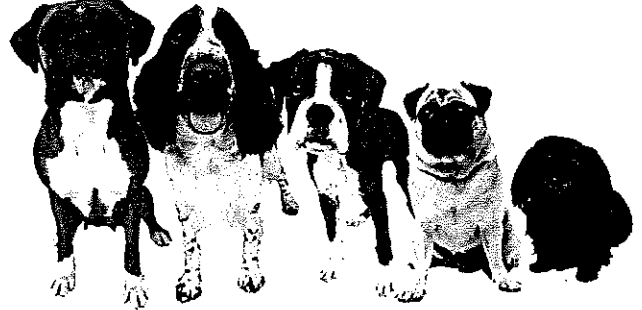
Write a number sentence showing how to divide the dog bones evenly among the dogs. We did the first one for you.

1 _____



$$\underline{15} \div \underline{3} = \underline{5}$$

4 _____



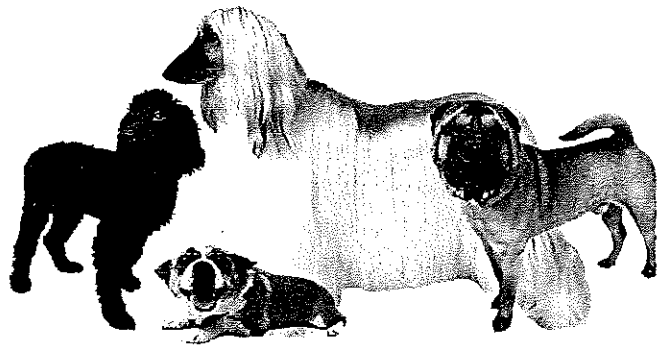
$$\underline{\quad} \div \underline{\quad} = \underline{\quad}$$

2 _____



$$\underline{\quad} \div \underline{\quad} = \underline{\quad}$$

5 _____



$$\underline{\quad} \div \underline{\quad} = \underline{\quad}$$

3 _____



$$\underline{\quad} \div \underline{\quad} = \underline{\quad}$$

6 _____



$$\underline{\quad} \div \underline{\quad} = \underline{\quad}$$

Number Neighbors

Related division and multiplication sentences are called **fact families**. Use the numbers in each family's house to write fact-family number sentences. (We did the first one for you.) Then figure out to which family each "Mystery Member" belongs.

Singer Family
7 8 56

$$\begin{array}{l} \underline{7} \times \underline{8} = \underline{56} \\ \underline{8} \times \underline{7} = \underline{56} \\ \underline{56} \div \underline{7} = \underline{8} \\ \underline{56} \div \underline{8} = \underline{7} \end{array}$$

The dividend is the total number being divided. The number of groups the total is to be divided into is the divisor. The answer is called the quotient.

$$\begin{array}{c} \swarrow \quad \uparrow \quad \swarrow \\ 15 \div 5 = 3 \\ \text{dividend} \quad \text{divisor} \quad \text{quotient} \end{array}$$

Cheng Family
7 3 21

$$\begin{array}{l} \underline{\quad} \times \underline{\quad} = \underline{\quad} \\ \underline{\quad} \times \underline{\quad} = \underline{\quad} \\ \underline{\quad} \div \underline{\quad} = \underline{\quad} \\ \underline{\quad} \div \underline{\quad} = \underline{\quad} \end{array}$$

Purvis Family
4 9 36

$$\begin{array}{l} \underline{\quad} \times \underline{\quad} = \underline{\quad} \\ \underline{\quad} \times \underline{\quad} = \underline{\quad} \\ \underline{\quad} \div \underline{\quad} = \underline{\quad} \\ \underline{\quad} \div \underline{\quad} = \underline{\quad} \end{array}$$

Mystery Member #1

I'm a division sentence. My dividend is an even number greater than 40. My family: _____

Mystery Member #2

I'm a division sentence. My dividend, divisor, and quotient are all odd numbers. My family: _____

Remainder Reminder

Divide. Then use the remainders to crack the code and solve the knock-knock jokes.

Sometimes when you try to divide a number into equal groups, there will be an amount left over. This is called the remainder. For example:

$$\begin{array}{r} 3 \text{ R}2 \\ 5 \overline{)17} \\ \underline{-15} \\ 2 \end{array}$$

There are 3 groups of 5 with 2 left over.

$$\begin{array}{r} 12 \text{ R}3 \\ 4 \overline{)51} \\ \underline{-40} \\ 11 \\ \underline{-8} \\ 3 \end{array}$$

There are 12 groups of 4 with 3 left over.



Knock knock.

Who's there?

Dwayne.

Dwayne who?

Dwayne _____ !

R5

R3

R1

R6

Knock knock.

Who's there?

Scott.

Scott who?

Scott _____ !

R8

R7

R2

R4

R9

$$\begin{array}{r} \mathbf{1} \\ 8 \overline{)47} \\ \hline \end{array}$$

to

$$\begin{array}{r} \mathbf{5} \\ 7 \overline{)52} \\ \hline \end{array}$$

tub

$$\begin{array}{r} \mathbf{2} \\ 8 \overline{)29} \\ \hline \end{array}$$

the

$$\begin{array}{r} \mathbf{6} \\ 5 \overline{)27} \\ \hline \end{array}$$

do

$$\begin{array}{r} \mathbf{3} \\ 2 \overline{)55} \\ \hline \end{array}$$

I'm

$$\begin{array}{r} \mathbf{7} \\ 10 \overline{)99} \\ \hline \end{array}$$

you

$$\begin{array}{r} \mathbf{4} \\ 9 \overline{)98} \\ \hline \end{array}$$

nothing

$$\begin{array}{r} \mathbf{8} \\ 7 \overline{)83} \\ \hline \end{array}$$

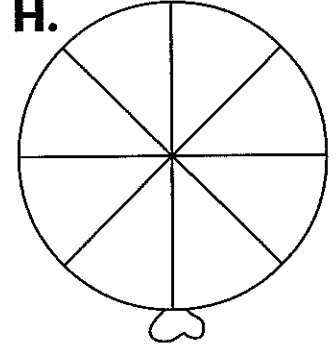
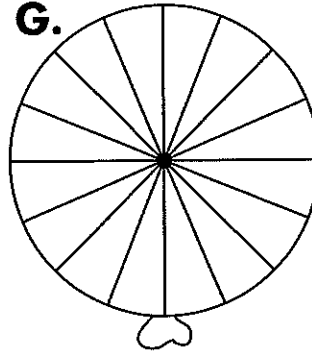
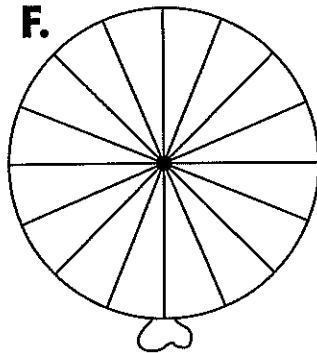
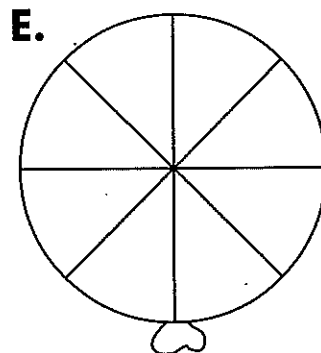
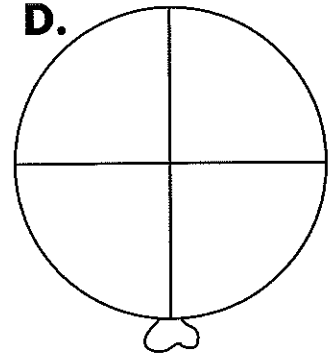
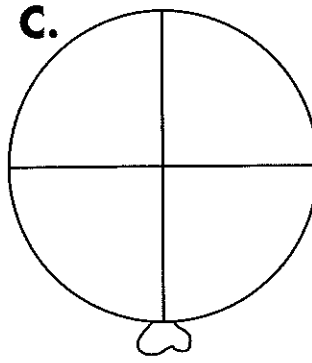
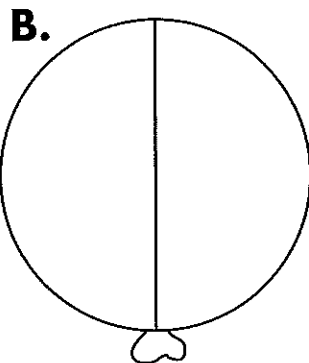
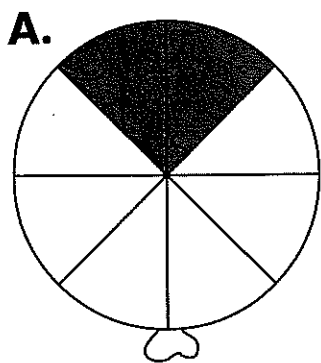
dwooning

$$\begin{array}{r} \mathbf{9} \\ 6 \overline{)58} \\ \hline \end{array}$$

with

Up and Away With Fractions

Follow the directions to color in the balloons. (We did the first one for you.) Then use the balloons to help you answer the questions about equivalent fractions. Circle all the correct answers for each question. There may be more than one.



Balloon A: Color in $\frac{2}{8}$.

Balloon B: Color in $\frac{1}{2}$.

Balloon C: Color in $\frac{3}{4}$.

Balloon D: Color in $\frac{1}{4}$.

Balloon E: Color in $\frac{6}{8}$.

Balloon F: Color in $\frac{8}{16}$.

Balloon G: Color in $\frac{4}{16}$.

Balloon H: Color in $\frac{4}{8}$.

1 $\frac{1}{2}$ is equivalent to:
 $\frac{2}{8}$ $\frac{4}{16}$ $\frac{8}{16}$

2 $\frac{3}{4}$ is equivalent to:
 $\frac{6}{8}$ $\frac{4}{8}$ $\frac{4}{16}$

3 $\frac{1}{4}$ is equivalent to:
 $\frac{4}{16}$ $\frac{2}{8}$ $\frac{1}{2}$

Snack on Fractions

This recipe for GORP (**G**ood **O**ld **R**aisins and **P**eanuts) serves two. Can you adjust the recipe twice so that it serves four and six? Add the fractions to increase the amounts.

INGREDIENT	SERVES 2	SERVES 4	SERVES 6
Sunflower seeds	$\frac{1}{8}$ cup	$+$ $\frac{1}{8}$ cup = _____	$+$ $\frac{1}{8}$ cup = _____
Raisins	$\frac{1}{4}$ cup	$+$ $\frac{1}{4}$ cup = _____	$+$ $\frac{1}{4}$ cup = _____
Unsalted peanuts	$\frac{1}{3}$ cup	$+$ $\frac{1}{3}$ cup = _____	$+$ $\frac{1}{3}$ cup = _____
Granola	$\frac{1}{2}$ cup	$+$ $\frac{1}{2}$ cup = _____	$+$ $\frac{1}{2}$ cup = _____
Plain M&Ms	$\frac{1}{2}$ cup	$+$ $\frac{1}{2}$ cup = _____	$+$ $\frac{1}{2}$ cup = _____

Put all ingredients in a large bowl, mix them, and you're ready to go!



- If the denominators (the bottom parts) are the same, just add the numerators (the top parts).

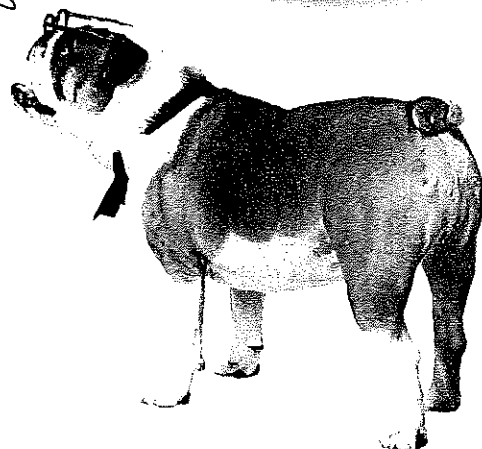
Example: $\frac{2}{5} + \frac{2}{5} = \frac{4}{5}$

- If the numerator and the denominator are the same, the fraction equals 1.

Example: $\frac{5}{5} = 1$

- To add a mixed number (a whole number plus a fraction), add the whole numbers together and add the fractions together.

Example: $1\frac{1}{4} + 1\frac{1}{4} = 2\frac{2}{4}$



Which Worm?

Farris, Vince, and Rebekka— which worm is which? First, measure each worm. Here's how:

1. Tape the end of a piece of string to one end of the worm. Then cover the worm with the string, following all of the loops and curves.

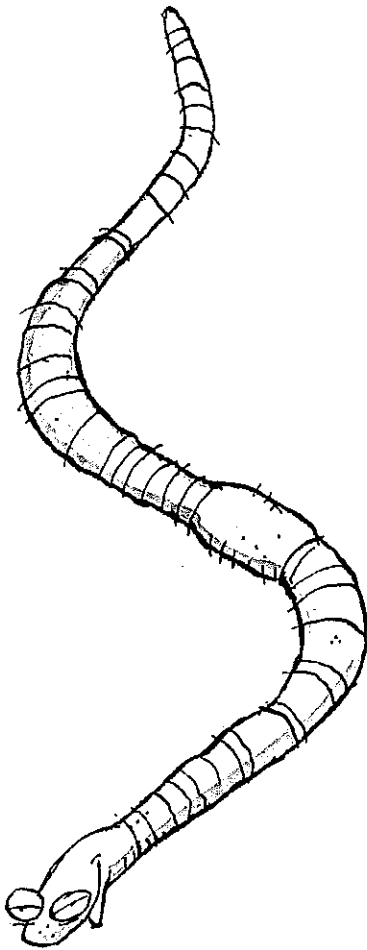
2. Make a mark on the string where the worm ends.

3. Pull the string straight. Use a ruler to measure in inches the length of the string from the end to the mark. Write down the measurement to the nearest quarter inch.

Now, use these clues to find each worm's name.

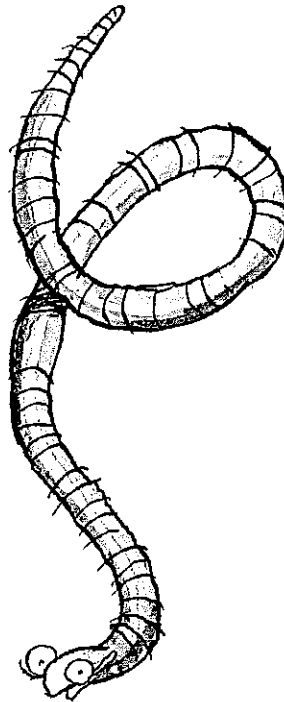
1. Vince is longer than Rebekka.

2. Farris is $\frac{2}{4}$ inch shorter than Vince.



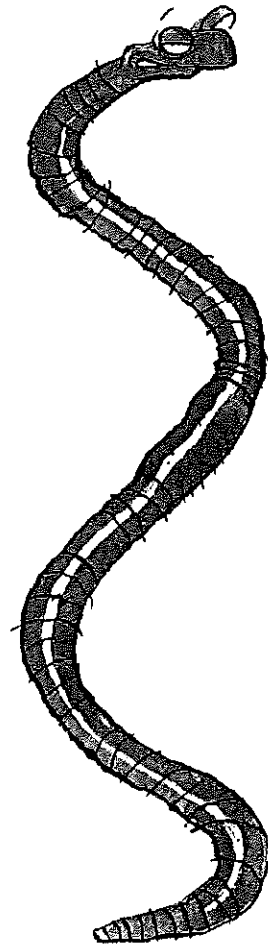
Length: _____

Name: _____



Length: _____

Name: _____



Length: _____

Name: _____

Metric Moves

Make the right moves to win the game! Put a marker (like a penny or a paper clip) in square No. 1. Read the question. Your answer will tell you where to go next.

1. Which metric unit would you use to measure the thickness of this book?
a. millimeters—go to 4
b. meters—go to 11

2. Well, you could measure distance in millimeters—if you were an ant! If you're a human, go back to 5 and try again.

3. Yes! A spoonful of cough syrup contains about 5 milliliters. Feeling better? Good—you're ready to make a pizza! How would you weigh the dough?
a. in grams—go to 5
b. in milligrams—go to 8

4. Yes! This book is about 3 millimeters thick. Now try this: How would you measure cough syrup?
a. in centimeters—go to 10
b. in milliliters—go to 3

5. Way to go! One pizza uses about 560 grams of dough. Hungry for more? How would you measure the distance you walked around Disney World?
a. in kilometers—go to 12
b. in millimeters—go to 2

6. Right. Most cars' gas tanks can hold about 50 liters of gas. Zoom on: Which unit would you use to measure yourself?
a. kilograms—go to 7
b. centimeters—go to 7

7. We admit it—that was a trick question! You can measure your weight in kilograms and your height in centimeters. Either way, you measure up as a winner!

8. Not unless you were making the world's smallest pizza! Go back to 3 and try again.

9. Sorry. You wouldn't measure gasoline in meters, unless you poured it into one long line! Drive back to 12 and try again.

10. Oops! Centimeters measure length, not liquids. Take two aspirin and head back to 4 to try again.

11. Nope. If this book were even one meter thick, you wouldn't be able to lift it. Go back to 1 and try again.

12. You got it! Most people walk about 4 kilometers an hour. Now step up to this: How would you measure gasoline for a car?
a. in liters—go to 6
b. in meters—go to 9

Penguins Everywhere!

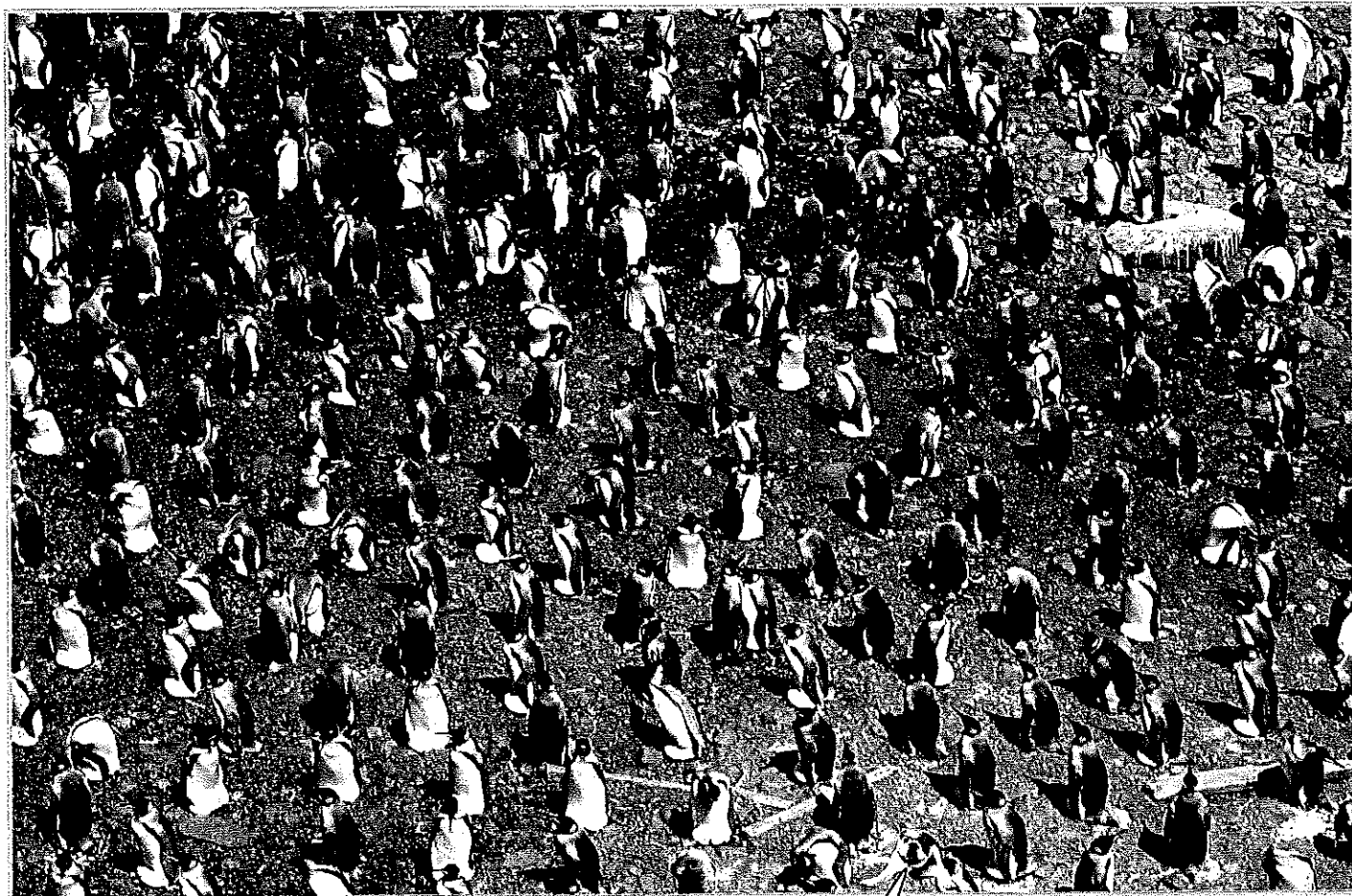
How many penguins are on this page? Don't worry, you don't have to count them. You can estimate! Here's how:

1. Draw a box (about one inch by one inch) anywhere on the photo.
2. Count the number of penguins in that box.
3. Estimate how many boxes like

the one you drew would fit on the photo.

4. Multiply the number of boxes that would fit on the photo by the number of penguins in the box. The answer is an estimate of the number of penguins pictured.

My estimate is:



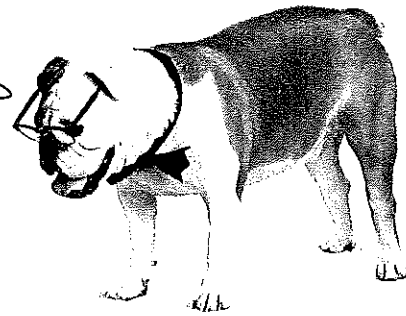
Good job!
You found the
hidden dog!

Sleepover Math

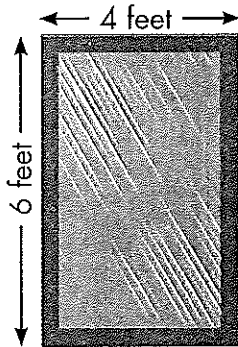
It's a sleepover! Find the perimeter and area of each blanket. (We did the first one for you.) Then answer the questions.

Perimeter measures the distance around a shape. To find the perimeter of a rectangle, add the lengths of all of its sides.

Area measures the number of square units, such as square feet (sq. ft.), inside a shape. To find the area of a rectangle, multiply its length times its width.

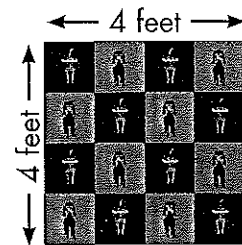


A. Perimeter:
20 ft.
Area:
24 sq. ft.



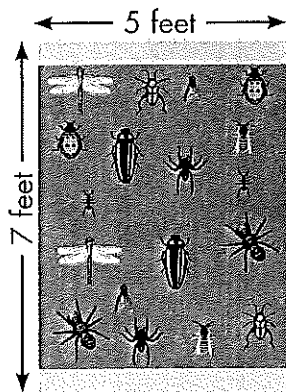
C. Perimeter:

Area:



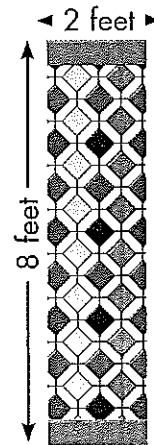
B. Perimeter:

Area:



D. Perimeter:

Area:



1 Which two blankets have the same perimeter? _____

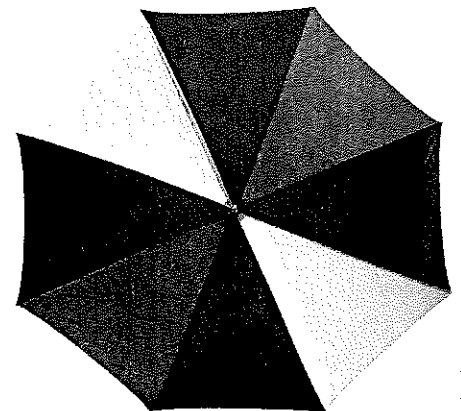
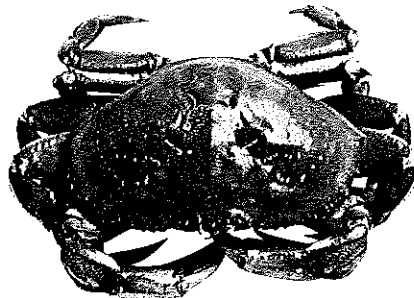
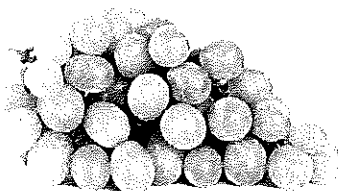
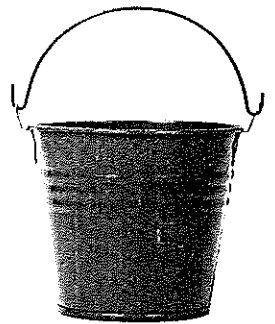
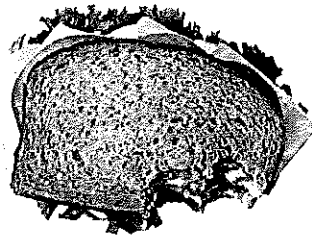
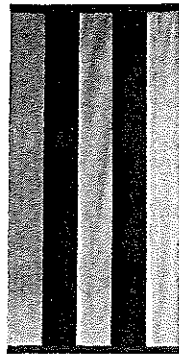
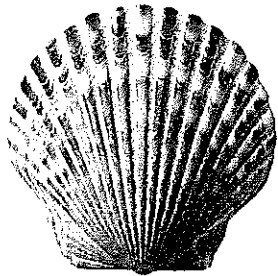
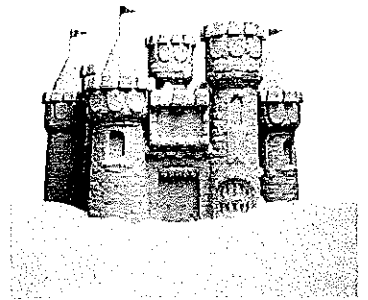
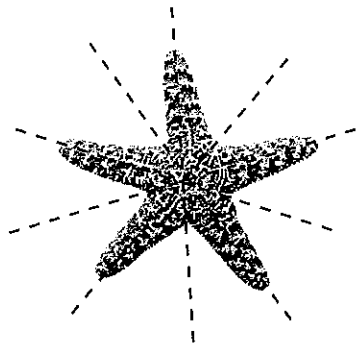
2 Which two blankets have the same area? _____

3 If you put blankets **A** and **C** together so that they form a rectangle, what will the perimeter of the rectangle be?

Symmetry Goes to the Beach

A shape has **symmetry** if it can be divided into two halves that are mirror images of each other. Some of the objects on this page are symmetrical. Draw the line or lines of symmetry through them.

Some shapes have more than one line of symmetry, like this:



Team Players

What's the official number of players a team can have on the field for some favorite sports? Read the chart to find out. Then use it to fill in the bar graph. We filled in the first bar for you.

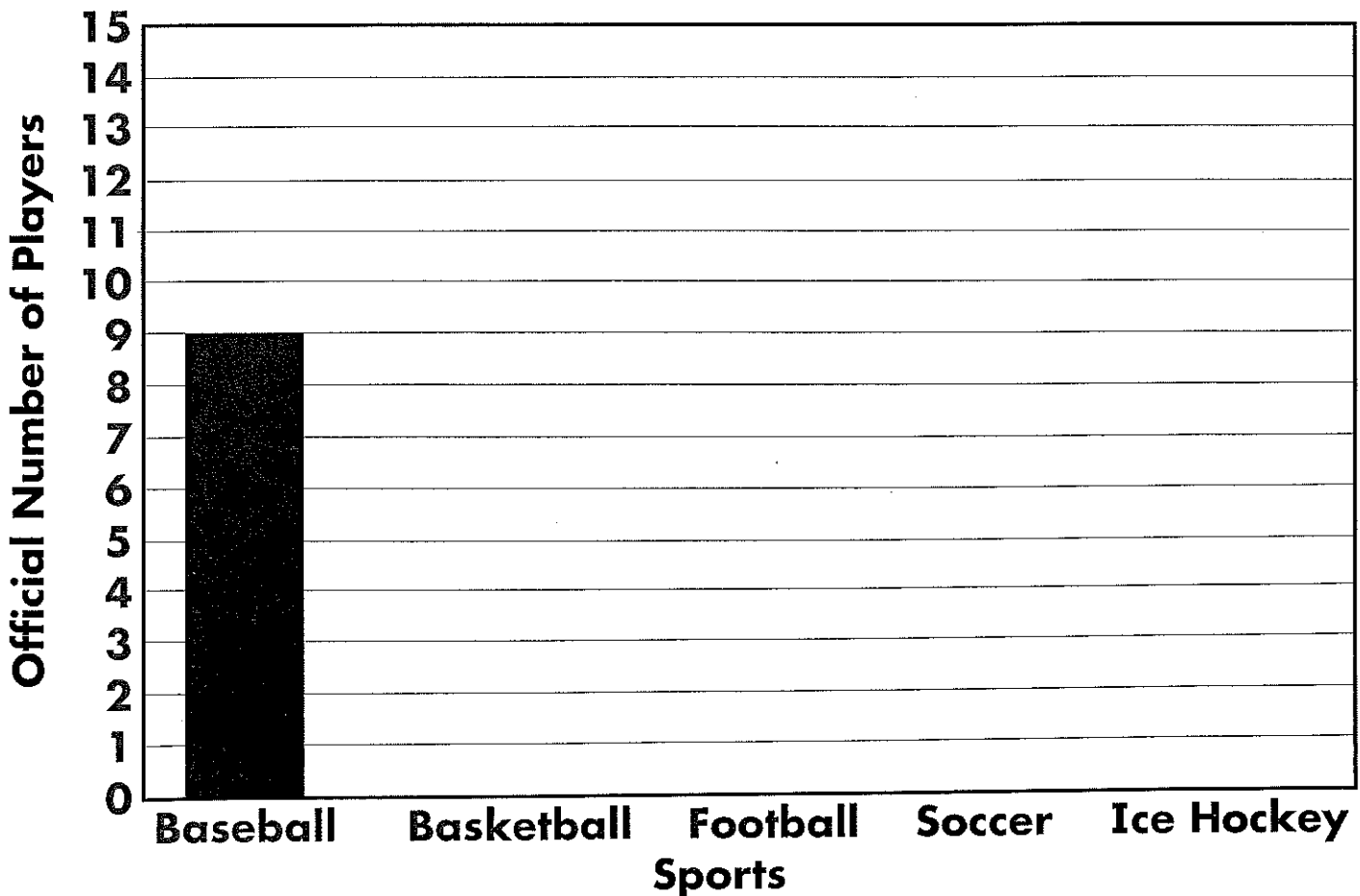
SPORT	OFFICIAL NUMBER OF PLAYERS
Baseball	9
Basketball	5
Football	11
Soccer	11
Ice Hockey	6

Which two sports have the most players?

How many players does each have?



Number of Players a Team Has on the Field



Wild About Graphs

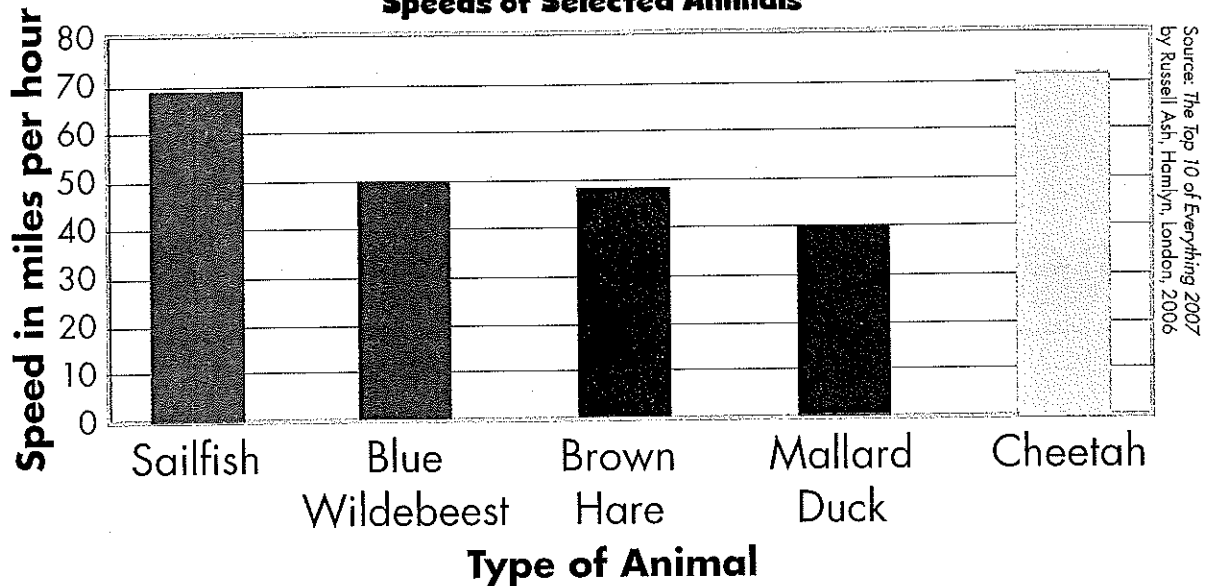
Learn some cool animal facts by reading the graphs on these pages. Study the bar graph, the circle graph, and the line graph. Then answer the questions.

Super Speedy!

The cheetah is the fastest land animal on Earth. How does it compare with other quick creatures? Read this bar graph.



Speeds of Selected Animals



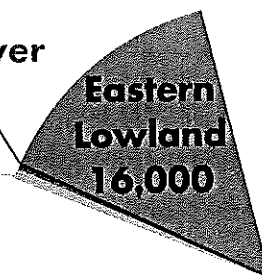
How Many Gorillas?

There are four kinds of gorillas. Read the circle graph to find out how many of each kind live in the wild.

Gorillas in the Wild, by Type



Cross River
275
Mountain
700

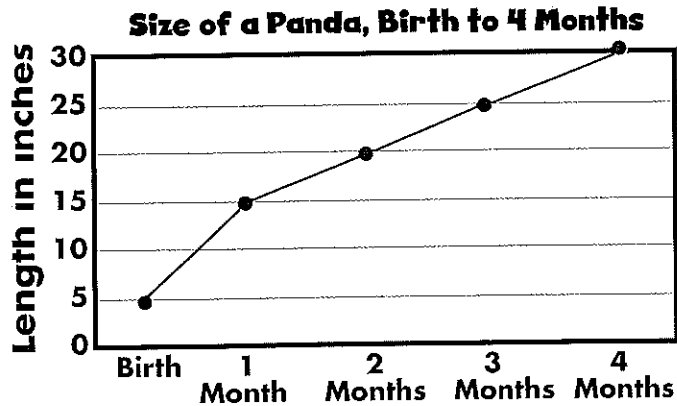


Western Lowland
94,500



A Panda Grows Up

A newborn panda is about the size of a stick of butter. This line graph shows how many inches a baby panda grows from birth to 4 months.



1 Which animal is faster than a mallard duck but slower than a wildebeest? _____

2 About how much faster is a sailfish than a brown hare? _____

3 About how fast can a brown hare run? _____

4 How many mountain gorillas are there living in the wild? _____

5 Which type of gorilla is there the most of in the wild? _____

6 What is the total number of gorillas living in the wild? _____

7 How long is a panda when it is first born? _____

8 How many inches does a panda grow from birth to 3 months?

9 How many inches does a panda grow from 3 months to 4 months? _____

Bonus: What type of graph shows how one thing changes over time?
