

GT June Enrichment

Parents/Guardians,

These ELA & Math resources will enrich and add depth to the thinking of your GT student through the summer because they encourage:

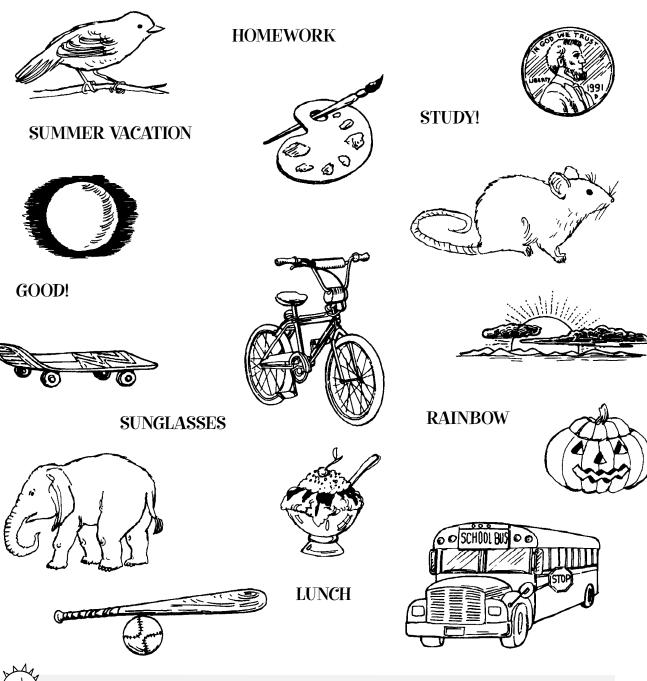
- Multiple pathways for solutions
- Analysis of word relationships and letters within words
- Backwards thinking (What doesn't belong?)
- Analogies
- Logic
- Creativity
- Student choice
- Multi-step problems
- Ranking (requiring analyzation)
- Analyzation of different number combinations to arrive at answers
- Error analysis

Until next time,

Your GT Coach

Mind Squeeze

Take two minutes to look at the words and objects on this page. Then turn the page over and see how many you can recall. Good luck!





Do It Again Repeat the activity. Can you improve your performance?

Wordplay

Imagine you live in a world with only 20 words. You can use these 20 words as much as you want, but you cannot use any other words at all. In the space below, list the 20 words you'd pick:

l	. 11
2	12
3	. 13
4	. 14
5	15
6	16
7	17
8	18
9	19
10	20



Use Your Words Now, write a paragraph using only your 20 words! Make sure your paragraph has at least five sentences.

Making a Menu

It's dinner time, but what are you going to eat? Complete this page to help you think of a menu.

Food that begins with b :	Food that grows below ground:
I	l
2	2
3	3
4	4
5	5
Fast food:	Food that grows on trees:
l	I
2	2
3	3
4	
5	5
Food that is white:	Now, list your five favorite foods:
I	1.
2	2
3	3
4	4
5	5
. 4	

Try This! Favorite Foods Make a graph showing the five favorite foods of your classmates.

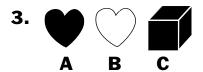
Transformations

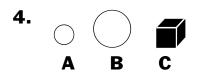
Study the first pair of shapes in each example. Think about how A changes into B. Then look at C. Which of the six numbered shapes changes in relation to C in the same way that A changes to B? Find that shape. Circle the number of your answer.



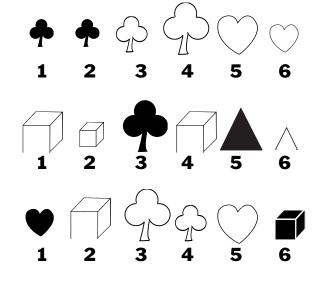


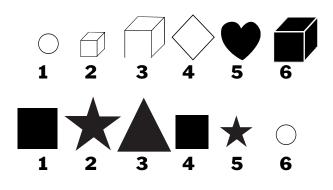




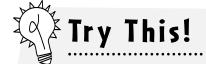








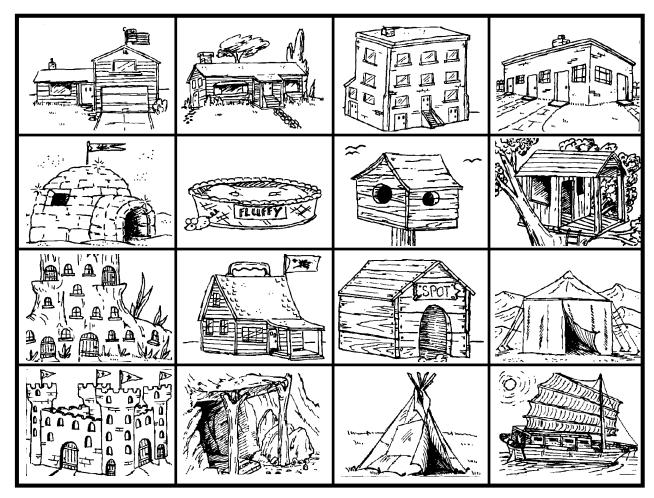




Explain Write a sentence or two to tell why you chose the answer you did.

Real Estate

Look carefully at the homes on this page. Then answer the questions.



- **1.** How many homes have only two windows and one door?
- **2.** How many homes have no windows?
- **3.** How many homes are not for people?
- **4.** How many homes do not have walls made of wood?

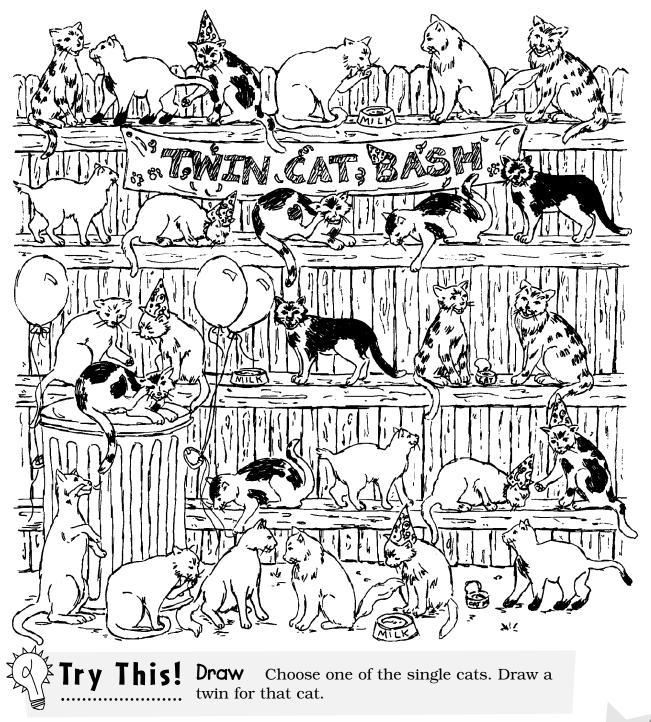
- **5.** How many homes float?
- **6.** How many homes have flags flying?
- **7.** How many homes have 12 or more windows?
- **8.** How many homes have a porch?



Try This! Draw Draw a picture of another home. Then reread the questions. How do the answers change?

Tricky Twins

The cats are having a party. Most of the cats are twins dressed just alike and standing the same way, but three single cats are at the party, too. With a colored pen or pencil, find and number the 12 pairs of identical twins. Then circle the three cats that have no twin.



Magic Words

Sometimes a word is just a word. But other times, words can be magic! Just move letters around and you have new words. Take a look at the examples below:

Original Word	New Word		
on	no		
now	won		
pot	top		
bat	tab		



See if you can rearrange the underlined words below to match the clues.

1. Change <u>sore</u> to a thorny flower.	
2. Change <u>bus</u> to a type of underwater transportation.	
3. Change <u>add</u> to a word for <i>father.</i>	
4. Change <u>not</u> to a word for 2,000 pounds.	
5. Change <u>stone</u> to little messages.	
6. Change <u>panel</u> to a flying machine.	
7. Change <u>net</u> to the number of fingers and toes you have.	
8. Change <u>low</u> to a very wise bird.	
9. Change <u>raw</u> to a word for battle.	
IO. Change <u>sale</u> to an animal.	



Ty This! More Magic What other magic words can you think of? Write some on a separate sheet of paper.

Name _____

Scrambled Sentences

Write this sentence on the board and have students copy it onto a sheet of paper:

O xwen o my zoct xand O saiz, "Zoct, O broked my arml in hr plaxces." Hex saiz, "Wellp, tayl xout of th laces."

Then tell students to follow your directions to unscramble the sentence. Read aloud the following:

- **1.** Change all the z's to d's.
- **2.** Cross off all the x's.
- **3.** Add a *t* to the end of the second word, the beginning of the third word, and the beginning of the fifteenth word.
- **4.** Change the three capital \vec{o} 's to capital \vec{i} 's.
- **5.** Add a p to the beginning of the last word.
- **6.** Cross off the last letter in the eleventh, thirteenth, and nineteenth words.
- **7.** Put an *s* on the front of the twentieth word and cross off the last letter.
- **8.** Add *or* to the end of the fifth and ninth word.
- **9.** Add *ee* to the end of the fifteenth word.
- **10.** Add *ose* to the end of the next to last word.

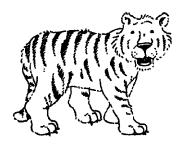
Now how does the sentence read?

On the Wild Side, Part I

Check out these amazing animal facts and then sort the animals according to the categories on page 46.



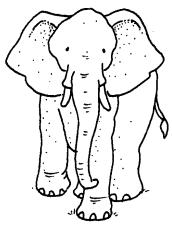
The average **black bear** weighs 300 pounds; a polar bear weighs 1,800 pounds.



A **tiger** is so strong that it can drag an animal three times its own weight.



The word **koala** means "no water."
Koalas get most of the water they need from the leaves they eat.



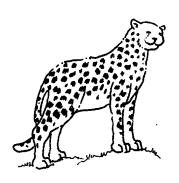
There are 40,000 muscles and tendons in an **elephant's** trunk alone.



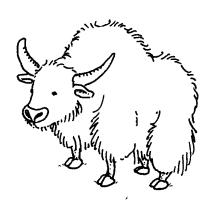
A **chimpanzee** can lift six times its own weight.



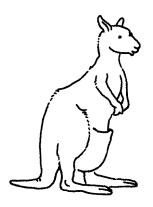
Savi's Pigmy Shrew is only two-and-a-half-inches long. It weighs less than an ounce.



The **cheetah** is the fastest land mammal. It can run at a speed of 70 miles per hour.



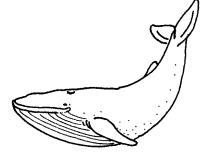
Yaks can live at 20,000 feet above sea level.



A **kangaroo** can leap more than 40 feet in a single jump.



In one night, a **bat** can catch and eat several hundred mosquitoes.



The largest mammal is the **blue whale**. Females can be more than 100 feet long and weigh as much as 200 tons.



An adult **lion** weighs 600 pounds—that's 470 pounds more than a cheetah.

On the Wild Side, Part II

Classify the animals in the following categories:

Strongest	Fastest	E. S.
Most Efficient	Largest	Smallest
Create new categories	that you can use to cla	essify these animals.

Try This! Organize Data Flying foxes can live up to 17 years in captivity. Make a bar graph to compare the life spans of the following animals.

Animal	Years	Animal	Years
llama	20	chicken	9
dog	15	armadillo	6
raccoon	12	toad	25

Big Questions

Answer the following questions. There is no "right" answer.

H	Iow would life be different if the sun never set?
	Iow would life be different if people could only get from place to place by valking?
	Iow would life be different if you were a bug instead of a human?
H	Iow would life be different if there was no gravity?
H	Iow would life be different if the sky was green?
	Now would life be different if the United States, Europe, Africa, China, tc., were all connected and there was only one land mass?

Make a Wish

Every week, Jeffrey cleans out the wishing well at the park. How much money did he find this week? Use these clues to figure out how many pennies, nickels, and dimes he found. Write your answer on the corresponding basket



CLUES

- **I.** He finds at least one penny, one nickel, and one dime.
- **2.** He has a total of 14 coins.
- **3.** The coins add up to 56 cents.
- **4.** He has more nickels than dimes.
- **5.** He has the same number of pennies as nickels.





Another Problem Change the coins and rewrite the problem. See if a classmate can solve it.

Riddle Me This

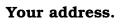
Know any good jokes, riddles, and puns? Here are some that will make you laugh:

What kind of dress do you have that you never wear?



What's the tallest building in your city?

The library—it has the most stories.



Draw a line matching each joke to its answer.

Joke	Answer

- **I.** What's easy to get into but hard to get out of?
- **2.** Why did the man pour veggies all over the world?
- **3.** When is a car not a car?
- **4.** If 2 is company and 3 is a crowd, what's 4 and 5?
- **5.** How can you make a hamburger roll?
- **6.** If I had 6 oranges in one hand and 8 in the other, what would I have?
- **7.** Why did the candle fall in love?
- **8.** Where was the Declaration of Independence signed?
- **9.** Why do ducks fly south?

Because	it's	too	far	to
walk				

Nine

Very big hands

He wanted peas on Earth.

On the bottom

When it turns into a driveway

Trouble

Take it up a hill and push it down.

He met the perfect match.



Keep Laughing Make some jokes of your own by writing a funny answer to these questions:

What's worse than finding a worm in your apple? What year do frogs like best?

Amazing Analogies

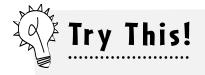
Analogies show relationships between pairs of words.

Analogies look like this: yolk : egg :: pit : cherry.

You read this analogy by saying: "Yolk is to egg as pit is to cherry." In this example, the relationship is part to whole: a yolk is part of an egg, and a pit is part of a cherry.

Complete the analogies below. Then write the analogy statement. The first one has been done for you.

I. dry: desert:: wet: ocean	Dry is to desert as wet is to ocean.
3. three : triangle :: four :	
4. Venus : planet :: poodle :	
5. pears : trees :: pumpkins:	
6. turkey: Thanksgiving:: witch:	
7. shades : windows :: rugs :	
8. swimming : water :: sledding : _	
9. grapes : cluster :: bananas :	
10. teacher: chalk:: artist:	
II. book : read :: television :	
12. sugar : sweet :: lemon :	



Name the Relationships Reread the analogies, then identify the kind of relationship each one shows.



Addition and Subtraction: Set 2

Using Inference to Find Totals

One week Toni found pennies on the sidewalk every day on the way to school. On Monday, she found 2 pennies. On Tuesday, she found 3 more than she found on Monday.

On Wednesday, Toni found 2 more than she found on Tuesday. On Thursday, she found 2 more than she found on Wednesday. On Friday, she found the same number of pennies that she found on Monday.

How much money did she find all together?

Mr. Wong's class decided to tally the taxis, buses, and trucks they could see from the classroom window between 9 A.M. and 9:30 A.M. on two days. They formed 3 groups to do the counting.

On Monday, Group 1 counted 24 taxis, Group 2 counted 7 buses, and Group 3 counted 31 trucks. On Tuesday, Group 1 counted 2 more taxis than they counted on Monday. Group 2 counted I fewer bus than on Monday, and Group 3 counted 3 more trucks than on Monday.

How many of each kind of vehicle did the students count all together?

ALTERNATE QUESTION: How many vehicles did they count all together?

Alexa, Barker, and Crystal entered a charity walkathon. Their sponsors agreed to give \$1.00 for each mile they walked.

Alexa had 10 sponsors, and she walked 4 miles. Barker had 12 sponsors, and he walked the same distance as Alexa. Crystal had 20 sponsors, and she walked I more mile than Alexa.

How much money did the 3 walkers raise all together?





During a rainy spell, a class measured the amount of rainfall each day for 5 days.

On Monday, they measured I inch of rain. On Tuesday, they measured twice as much as on Monday. On Wednesday, they measured 3 inches. On Thursday, they measured the same amount as on Tuesday. On Friday, they measured I inch.

How much did it rain all together from Monday through Friday?



Daisy and Eduardo manage the school store, which is open on Monday, Wednesday, and Friday. They sell pencils for 10 cents each and erasers for 25 cents each. One week they had especially good sales.

On Monday, they sold 20 pencils and 6 erasers.

On Wednesday, they sold half as many pencils and twice as many erasers as on Monday. On Friday, they sold twice as many pencils as on Monday and twice as many erasers as on Wednesday.



How many pencils did they sell all together, and how many erasers?

ALTERNATE QUESTION: How much money did they collect that week from sales of pencils and erasers?



The cafeteria at Adams School sells apple crunch bars for 50 cents. The cashier kept track of how many bars they sold each week for a month.

The first week, they sold 98 bars. The second week, they sold 100 more than they sold the first week. The third week, they sold half as many as they did the second week. The fourth week, they sold 107 bars.

How many bars were sold in total over the 4 weeks?

ALTERNATE QUESTION: What was the total amount of money taken in from the sale of the bars in 4 weeks?



Addition and Subtraction: Set 3

Figuring Totals After Exchanges

Barry and Brian like to play marbles. One Saturday morning, Barry had 56 marbles and Brian had 47 marbles.

They played for 3 hours on Saturday afternoon. Barry won 9 marbles from Brian and Brian won 12 marbles from Barry.

How many marbles did each boy have in the end?

Christine and Carmen often borrowed money from each other. At the beginning of the week, Christine had \$8.69 and Carmen had \$7.36.

On Monday, Carmen lent Christine \$1.25 for lunch and spent \$1.40 for her own lunch. The next day, Christine lent Carmen \$1.40 for lunch and spent \$1.80 for her own lunch.

How much did each girl have on Wednesday before they paid each other back?

3 Carlos and Frank practice tennis together at the public courts. One Saturday, they took 40 tennis balls with them.

They couldn't find 8 tennis balls they hit into the bushes and 5 that landed in the creek. Squirrels ran off with 3 more. They found 4 tennis balls on their court and kept those.



How many tennis balls did they have at the end of the day?

ALTERNATE QUESTION: How many did they lose all together?





Angelica had 63 charms in her collection and Brittany had 49 in hers when they decided to trade charms.

Angelica gave Brittany 13 charms, and Brittany gave Angelica 7 charms.

How many did each girl have after the trade?

ALTERNATE QUESTION: Which girl had more charms at the end?



Gamel put \$3.50 in change in his pocket and set off to buy a goldfish. When he got to the store, he discovered that some of his money had fallen through a hole in his pocket. He had only \$2.39.

When he went back to look for his money, he found a one-dollar bill, 3 pennies, and 1 dime.

How much did he have after finding the money?

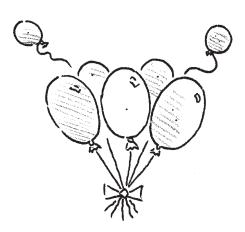
ALTERNATE QUESTION: How much did he lose on the way to the store?



Ms. Penny's class was responsible for bringing balloons to the school festival. Each of the 28 students brought in I package of 5 balloons, and the class went outside to blow them up.

As they were inflating the balloons, 24 popped and 11 blew away. Ms. Penny found 2 more packages of 5 balloons in her desk, and the students inflated those without losing a single one.

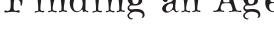
How many inflated balloons did the class have all together at the end?





Addition and Subtraction: Set 4

Finding an Age



Diana's grandmother was born in 1939. She was 30 years old when Diana's mother was born.

Diana's mother was born in 1969, and Diana was born in 1993.

How old was Diana's grandmother when Diana was born?

Flora's father bought a 1957 Chevy for \$4,000 in 1985 when Flora was 10 years old.

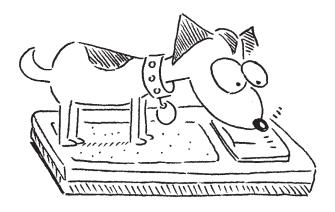
He kept the car for 12 years, and then he sold it for \$6,000.

How old was the car when he sold it?

Timmy got a 2-month-old puppy for his ninth birthday in June. The puppy weighed 15 pounds, and Timmy named him Bear.

Timmy expects to keep Bear until he graduates from high school at the age of 18.

How old will Bear be when Timmy graduates from high school?







Sumi moved to the United States with her parents in 1994, when she was 2 years old. The family moved to Iowa 2 years later.

After living in Iowa for 3 years, the family moved to Virginia. In the year 2000, they moved to Florida.

How old was Sumi when her family moved to Florida?



Tyrone's grandfather was born in January 1942. Tyrone's father was born in January 1968.

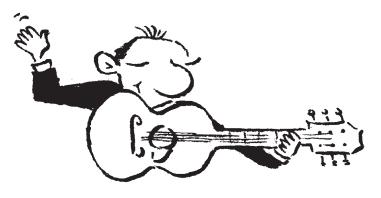
Tyrone was born in January 1995.

How old were Tyrone's grandfather and father when Tyrone was born?



Skip's grandfather, who was born in 1936, had a special guitar made for himself in 1960. He gave the guitar to Skip's father for his eighteenth birthday in 1984.

Skip's father gave the guitar to Skip for his fourteenth birthday in 1988.



How old was the guitar when Skip received it?

ALTERNATE QUESTION: How old was Skip's grandfather when Skip received his special guitar?



Addition and Subtraction: Set 5

Finding the Year of Birth

Abraham Lincoln, the sixteenth president of the United States, was born on February 12.

If Lincoln were still alive in the year 2000, he would have celebrated his 191st birthday on February 12 of that year.

In what year was Lincoln born?



2

In 2001, Rayna created a family tree. She wrote 1938 as the year of her grandmother's birth and 1906 as the year of her great-grandmother's birth.

Rayna's mother looked at the tree and said, "Oops! You've got the wrong year of birth for your great-grandmother. She was 37 years old when my mother was born, not 32."

In what year was Rayna's great-grandmother born?

3

Thomas Jefferson wrote the first draft of the Declaration of Independence in Philadelphia in 1776 and became president of the United States 25 years later.

Jefferson was 57 years old when ran for president in 1800. He and Aaron Burr received the same number of votes, so Congress had to decide who would be president. In February of 1801, after 36 ballots, Jefferson won and took office soon after.

In what year was Thomas Jefferson born?





In 2002, Monica found a postcard that her grandfather had sent to her grandmother when they were young. The postcard was mailed on July 3, 1954. They were married 4 years later.

Monica's grandfather was 18 years old when he sent the card.

In what year was Monica's grandfather born?





Booker T. Washington was born in Virginia and later moved to Tuskegee, Alabama.

In 1881, Booker T. Washington became principal of Tuskegee Institute. He was 25 years old.

In what year was Booker T. Washington born?



When the United States declared its independence in 1776, the capital was in Philadelphia. George Washington, who became president in 1789 at the age of 57, decided that the new country should have a new capital.

Washington chose the site for the new capital in 1791. Nine years later, everything was ready and the federal government moved to the new capital, Washington, D.C.

In what year did Washington, D.C., become the official capital of the United States?



Money: Set 13

Spending Money



Cameron's grandmother gave him \$10.00. He spent \$3.25 on a joke book.

Then he spent \$1.70 on an energy bar and \$1.50 on a plastic whistle.

Does he have enough left over to buy a magazine that costs \$2.70?

ALTERNATE QUESTION: How much will he have left after he buys the magazine?

Ruby's grandmother gave her \$20 for her birthday. She deposits \$7 in the bank and decides to spend the rest.

Ruby buys a used CD for \$3 and a leather bracelet for \$5. Then she sees a small bag that she likes. It costs \$7.

Does Ruby have enough to buy the bag?



Lonnie's godfather gives him \$25 as a graduation present. Lonnie wants to buy some old coins and a board game that costs \$4.95 plus 25 cents tax.

Lonnie finds packets of old coins at a coin store for \$7.95 each plus 40 cents tax.



How many packets of coins can he buy after he buys the game?

ALTERNATE QUESTION: How much will Lonnie have left after he buys the game and the coins?





By the end of the winter, Thelma had earned \$250 shoveling snow on her block. She decided to spend some on her horse and save some for a new saddle.

Thelma bought a used bridle for \$95 and a book on grooming horses for \$11.



How much does Thelma have left to put toward a new saddle?



Yoshi's grandfather gives her \$40 for spending three days cleaning out his garage.

Yoshi buys 3 tomato plants, 3 pots, and 2 packages of potting soil so that she can grow tomatoes. The plants cost \$2.00 each, and the pots cost 75 cents each. The soil costs \$3.95 a package.

How much will Yoshi have left over to buy bamboo stakes and fertilizer?

ALTERNATE QUESTION: If the stakes and fertilizer cost a total of \$9.00, how much will she have left over after buying them?



After six months of washing dogs, Justin had earned \$575. He wants to put \$500 in the bank but also wants to buy a skateboard, a helmet, and kneepads.

At a block sale, Justin sees a skateboard for \$20 and a helmet for \$10, so he buys them. Then he buys kneepads, almost new, for \$15.

Can Justin put \$500 in the bank after all his purchases?



Money: Set 14

Planning Purchases

1

Amy is giving a party, and she wants to give noisemakers as favors. She has invited 12 friends to the party and has \$5.00 to spend on favors.

She goes to a store and finds noisemakers at 50 cents for a package of 2.

If Amy wants everyone, including herself, to have a noisemaker, how much money will she have to spend?

2

Lamar's family has 2 cats. One day, his brother brings home a stray cat. Their mother says, "Did you think about the cost of feeding another cat?"

Cat food costs \$.59 a can, and each cat eats I can a day.

How much more will it cost the family to feed the new cat for I week?



ALTERNATE QUESTION: How much will it cost to feed all 3 cats for I week?

3

After school, lan and his sister stop for snacks at the corner market. They both like fruit chews that cost \$.39 each.

Each one eats I fruit chew each day after school.

How much money will they spend in I week for their snacks?

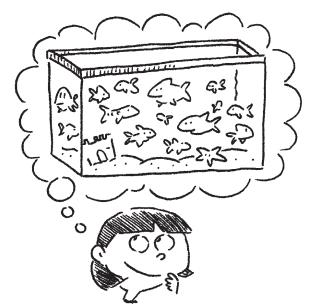




Louise got an aquarium for her birthday and wants to fill it with fish. She can afford to spend \$2.00 a week on fish.

The fish she wants cost \$.75 each.

How many fish can she buy in 6 weeks?





Paul uses 4 batteries every week for his electronic games.

He buys batteries in packs of 6 for \$4.10 a pack, including tax.

How much money will he have to spend on batteries in I month?



Olivia received \$10 as a gift from her grandmother. She wants to buy beads for making jewelry.

At a bead store, Olivia finds beads on sale at \$.80 for 2 packages. The tax is 6%.

How many packages can Olivia buy with the money from her grandmother?



Measurement: Set 18

Figuring Total Time to Complete a Project

1 Claud

Claudia started making peanut butter cookies at 2:00 P.M. It took her 15 minutes to mix the ingredients for 48 cookies.

She had only one cookie sheet to use, and it held 8 cookies. Each batch took 15 minutes to bake, and it took 5 minutes to get each batch ready for the oven.

When did Claudia finish?

George agreed to meet Larry at the city library at 11:30 A.M. to work on their project. He got to the bus stop at 10:15 A.M. and waited 10 minutes for the bus. The bus ride to the subway station took 15 minutes, and he waited 3 minutes for the subway.

The subway ride to the streetcar stop lasted 20 minutes, and he waited 6 minutes for the streetcar. The streetcar ride to the library took 15 minutes.

Did George arrive in time to meet Larry?

Nadia opened her new model airplane kit at 9:30 A.M. It took her 35 minutes to glue the pieces together. The directions said to wait 2 hours for the glue to dry.

After waiting the full time, Nadia painted the airplane, which took 20 minutes, and then waited I hour for the paint to dry.

What time was it when the paint was dry?







It took Dee 10 minutes to pour the plaster of paris into the cat mold and another 10 minutes to wipe off the excess. Then she let the plaster set for 4 hours.

It took her 20 minutes to open the mold and remove the plaster cat, 30 minutes to paint the statue, and I hour to let the paint dry. The paint was dry at 4:15 P.M. "Finished at last!" she said.

What time did Dee start her project?



Karyn decided to paint a tile for her mother. First she turned on her kiln. Then she got her paints and brushes ready, which took 20 minutes. It took her 45 minutes to paint a design on the tile.

Karyn waited 30 minutes more for the kiln to reach the right temperature and then put the tile in. She fired the tile for 2 hours, let it cool for 3 hours, and took the finished tile out of the kiln at 6 P.M.

What time did Karyn start her project?



Toby made his father a birthday cake. At 9 A.M., he mixed the ingredients and poured the batter in the pan. Then he realized that he had forgotten to turn on the oven.

He turned the oven on at 9:30 A.M. and waited 15 minutes for it to heat up to the right temperature. Then he put in the cake and let it bake for 25 minutes. He let the cake cool for 1 hour and then frosted it, which took 25 minutes.

What time did Toby finish?





Answer Key for Enrichment Resources

The answers are arranged in the same order as they appear in the packet. The highlighted pages are the answers for your grade's enrichment activities.

Recognizing and Recalling Activities

Trivia Trackdown, page 10

- 1.64
- 2. Pluto
- 3. an elephant
- 4. the Kitty Hawk
- 5. Albany
- 6. teeth
- 7. Sandra Day O'Connor
- 8. Canada and Mexico
- 9. Dr. Seuss
- 10. one
- 11. John Adams
- 12. three
- 13. Kansas and Missouri
- 14. Casper
- 15. Erie, Ontario, Michigan, Huron, Superior
- 16. Leonardo da Vinci
- 17. water
- 18. six
- 19. four
- 20, two

Recycled Words, page 13

- 1. eye 6. ship
- 2. land 7. rain
- 3. new 8. snow
- 4. road 9. play
- 5. run 10. egg

What Am I?, page 14

- 1. hail
- 6. heart
- 2. haiku
- 7. hero
- 3. half
- 8. high
- 4. hamburger 5. hay fever
- 9. history 10. Holland

Transformations, page 19

- 1.3
- 2. 2
- 3. 2
- 4, 6
- 5.5
- 6. 2

Distinguishing and Visualizing Activities

Within a Word, page 25

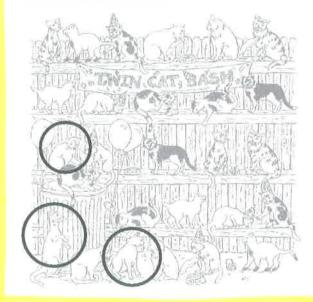
- 1. barbell 2. barn
- 3. barber
- 4. barrette
- 5. barge
- 6. wheelbarrow
- 7. barbed wire
- 8. barrel
- 9. bar graph

Real Estate, page 26

- 1. 2 2. 5 5. 1 6. 4
- 3. 3 4.9 7. 3
 - 8. 4

Tricky Twins, page 27

Single cats: row 1, first and third cat from the left; row 3, first cat from the left



Stargazing, page 28

M	(N	(0)	R	T	Н	5	T	Α	R)
	С	R	S	w	R	υ	M	N	J
L	Н	1	S	Υ	U	U	(8)	E	Α
ĸ	A	0	T	U	L	P	A	A	Z
Y	R	(N)	0	0	M	0	T	R	U
W	L	Q	U	Α	A.	Υ	U	T	Z
A	E	L	0	В	R	0	R	H	0
Y	S	Р	W	В	(5)	U	(N)	E	V

Triangle Challenge, page 29

13 triangles

How Do You Hide an Elephant?, page 31

- 1. Go fish or se e what we have to eat in the refrigerator.
- 2. Be ar tistic and paint a picture for me.
- 3. S he n eeds a new cover for her book.
- 4. To m ice d the cake for the birthday party.
- 5. Do g irls like soccer or baseball?
- 6. Ms. Dee r ead a book to the class.
- 7. What a big b owl of noodles you have!
- 8. Ho p on y our bicycle and let's go for a ride.
- 9. Jess took a pe ek into the package.
- 10. "S lam b am!" the ball hit the rim with a crash!
- 11. Jay did kic k it ten times in row.
- 12. Please have dinne <u>r at</u> my house on Monday.

Magic Words, page 32

 1. rose
 6. plane

 2. sub
 7. ten

 3. dad
 8. owl

 4. ton
 9. war

 5. notes
 10. seal

Anagram Adventure, page 33

1. read, dear	2. seat, eats
3. team, mate, tame	4. reap, pare
5. tales, least, steal	6. span, naps
7. nails, slain	8. race, care

Following Directions and Classifying

Wrong Rhymes, page 39

9. laps, pals

1. matter	11. jump
2. got	12. run
3. lacked	13. taste
4. furry	14. spill
5. train	15. boat
6. down	16. dead
7. talk	17. sock
8. light	18. sooner
9. lak e	19. hi k e
10. cheery	20. bread

Scrambled Sentences, page 43

I went to my doctor and I said, "Doctor, I broke my arm in three places." He said, "Well, stay out of those places."

Get Set, page 47

Possible responses:

- 1. All the vowels make a set; all the consonants make another set.
- 2. The Jet, kite, glider, and helicopter make one set because they are all manufactured items that fly. The robin, eagle, sparrow, and hummingbird make anoth-

- er set because they are all birds that fly.
- 3. Set #1 is green vegetables. Set #2 is yellow fruits. The intersection has fruits and vegetables that are both green and yellow.

In Groups, page 48

Possible responses:

- 1. The kitten is not a wild animal.
- 2. A tack is not a tool.
- 3. Track is the only sport that does not use a ball.
- 4. A melon does not have a pit.
- 5. Albany is not a state.
- 6. A ruby is not a metal.
- 7. You cannot write with a ruler.
- 8. Drums are not wind instruments.
- 9. Every word but arrive means to leave.
- 10. A horse is not a baby animal.
- 11. You cannot read a radio.
- 12. A foot is not a part of a face.

Prime Time Numbers, page 49

2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31, 37, 41, 43, 47, 53, 59, 61, 67, 71, 73, 79, 83, 89, 97
Try Thisi Answers can include 11, 13; 17, 19; 29, 31; 41, 43; 59, 61.

Sequencing and Predicting

Pressed for Time, page 54

Pie-Eating Contest	10:00-10:45
Brass Band	11:15-11:45
Sack Race	12:00-12:30
Corn Shucking	1:00-1:45

Inferring and Drawing Conclusions

Constant Confusion, page 70

 Jessica 	Judith	Justina
4. Jennifer	5. Jackle	

Shhh!, page 71

2. \bullet is an e

3. 🔺 is an n

4. \bullet is a c

5. 🌑 is an t

6. 🌰 is an l

The password is pencil

Q & A, page 72

Possible responses:

- 1. maps, food, directions
- 2. The grill would be warm; there would be a pile of ashes.
- 3. The land was rocky, there was no water, it was cold and barren.
- 4. Ask the person to lift something heavy; look at the person's muscles.
- 5. He saw rice on the ground; there were happy people and white limousines outside the church.
- 6. Both are animals, both give products that people use, both live on farms.
- 7. Drop a rock into the hole and see how long it takes to hit the ground; yell down and listen to the echo; tie a rock on a string and lower it into the hole.
- 8. You saw trees and leaves moving; you saw clothing blowing on a wash line.
- 9. It's too cold, too hot, too rainy, too rocky, or too
- 10. The "lights" could be people with flashlights, the eyes of an animal, or campfires.

Make a Wish, page 73		
denomination	amount	total
pennies	6	6¢
nickels	6	30¢
dimes	2	20¢
Total	14	56¢

Evaluating

Fact or Opinion?, page 83

Lact of Ohimon: bage on		
1. opinion	11. opinion	
2. fact	12. fact	
3. opinion	13. fact	
4. fact	14. opinion	
5. fact	15. fact	
6. opinion	16. opinion	
7. fact	17. fact	
8. fact	18. opinion	
9. fact	19. fact	
10. fact	20. fact	

Twins?, page 85

Possible	responses:
----------	------------

Possible responses:	
Objects	How Alike
1. sweater/blanket	used for warmth; used as covers
2. wind/water	natural forces; can be destructive; can be ener- gy sources; can move objects
3. fish/soap	go in water; float; slippery when wet
4. puppy/baby	need love, food, and attention; cry when unhappy; cannot survive alone
5. pencil/candle	long, thin shape; exterior material different from interior material; get shorter with use
6. oatmeal/bread	eaten for breakfast; grains; need to be cooked before they can be eaten
7. rain/tears	liquid; wet; transparent; associated with sadness
8. lion/eagle	symbols of power; predators; hunted
9. comb/saw	have pointed edges; teeth; held in your hands
10. spring/youth	part of a cycle; new beginnings

Analyzing

Puzzle Pattern, page 91

- 1. The shaded square moved down one space.
- 2. The shaded square again moved down one space.
- 3. The shaded square moved to the right. It will move to the right again.

What Does It Represent?, page 93

Possible responses:

a dove: peace; an eagle: America, strength, power, victory; the American flag: America, democracy, freedom, equality; a red rose: love, passion; a fox: craftiness, slyness; an owl: wisdom; a wedding ring: marriage; a four-leaf clover: good luck

Dare Dare, page 94

- 1. forget it!
- 2. head over heels
- 3. upset stomach
- 4. four-wheel drive

Flower Power, page 95

	Orange	Yellow	White	Total
Daffodils	1	3	6	10
Tulips	6	0	4	10
Totals	7	3	10	20

Odd Couples, page 96

Possible responses:

- 1. Both are the young of the species; both require care.
- Both are machines that convert words into type; both need human operators.
- 3. Both are a means of communication; both can entertain.
- 4. Both can help the environment; both come out after rain.
- 5. Both are sources of energy; both can be dangerous.
- 6. Both use air; both entertain.
- 7. Both are times of hope and possibility; both are part
- 8. Both are odd numbers; both are prime.
- 9. Both live in the jungle; both are hunted.
- 10. Both are fruits; both are red.

Divide and Conquer, page 97





3. Triangle cannot be divided into four equal pieces.



Riddle Me This, page 98

Answer Trouble 1. What's easy to get into but hard to get out of? He wanted peas 2. Why did the man pour on Earth. veggies all over the world? 3. When is a car not a car? a driveway 4. If 2 is company and 3 is

5. How can you make a hamburger roll?

a crowd, what's 4 and 5?

6. If I had 6 oranges in one hand and 8 in the other, what would I have?

When it turns into

Nine

Take it up a hill and push it down.

Very big hands

7. Why did the candle fall in love?

He met the perfect match.

8. Where was the Declaration of Independence signed?

On the bottom

9. Why do ducks fly south?

Because it's too far to walk

Amazing Analogies, page 99

Possible responses:

6. Halloween

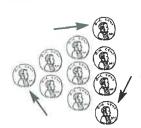
7. floors 1. ocean 8. snow 2. foot 3. square 9. bunch 10. paints 4. dog 11. watch 5. soil

Puzzling Problems, page 100

1. Smash the tip against the table. The bottom of the egg will be flat and the egg will stand on end.

12. sour

- 2. Stand in a doorway. Place a sheet of newspaper so half is on one side of the door and half is on the other. Close the door between the people.
- 3. The dentist was the boy's mother.



5. Fill the five-quart bottle and pour as much as you can into the three-quart bottle. Now empty the three quarts. Then pour the remaining two quarts into the three-quart bottle. Fill the five quart bottle again. Use it to fill the three-quart bottle. There are already two quarts in the three-quart bottle, so it will take one more quart. Four quarts will be left in the five-quart bottle.

Solutions and Answers

Here are the answers to the questions, along with the steps taken to solve each problem. Students may take a different approach to solving a problem than is explained here.

Addition and Subtraction

Set | (pages | 2-|3)

- 1. 23 watches + 4 more on Saturday = 27 27 + (2×3) = 33 watches ALTERNATE: $4 \times $2 = $8; 6 \times $1 = $6; $8 + $6 = 14
- 2. 42 + 12 + 9 + 14 = 77 stamps purchased 100 77 = 23 stamps needed
- 3. 440 + (4 × 5) + (3 × 5) + (2 × 5) + (2 × 5) = 495 cards purchased 500 495 = 5 cards left No. Shawn did not reach his goal.
- **4.** 28 (already owned) + 2 + 4 + 6 + 5 = 45 magnets ALTERNATE: 2 + 4 + 6 + 5 = 17 magnets
- 5. $3 + 6 + (3 \times 2) + (4 + 4) = 23$ waffles
- 6. Boris's total: 500 + 350 + 200 + 600 = 1,650 Eddie's total: 450 + 520 + 180 + 570 = 1,720 Eddie had the highest overall total.

Set 2 (pages 14-15)

- 1. 2 (Monday) + 5 (Tuesday) = 7
 7 (Wednesday) + 9 (Thursday) = 16 + 2 (Friday) = 18
 7 + 18 = 25 cents
- 2. Group 1: 24 (Monday) + 26 (Tuesday) = 50 taxis Group 2: 7 (Monday) + 6 (Tuesday) = 13 buses Group 3: 31 (Monday) + 34 (Tuesday) = 65 trucks ALTERNATE: 50 + 13 + 65 = 128 vehicles
- 3. Alexa: (4 × \$1) × 10 = \$40 Barker: (4 × \$1) × 12 = \$48 Crystal: (5 × \$1) × 20 = \$100 \$40 + \$48 + \$100 = \$188
- 4. Monday = 1; Tuesday = 2; Wednesday = 3;
 Thursday = 2; Friday = 1
 1 + 2 + 3 + 2 + 1 = 9 inches
- 5. Monday: 20 pencils, 6 erasers
 Wednesday: 10 pencils, 12 erasers
 Friday: 40 pencils, 24 erasers
 20 + 10 + 40 = 70 pencils; 6 + 12 + 24 = 42 erasers
 ALTERNATE: 70 × \$.10 = \$7.00; 42 × \$.25 = \$10.50;
 \$7.00 + \$10.50 = \$17.50
- 6. Week | = 98; Week 2 = 198; Week 3 = 99; Week 4 = 107 bars

98 + 198 + 99 + 107 = 502 bars sold ALTERNATE: $502 \times \$.50 = \251 total sales of bars

Set 3 (pages 16-17)

- 1. Barry: 56 + 9 12 = 53 marbles Brian: 47 - 9 + 12 = 50 marbles
- 2. Carmen: \$7.36 \$1.25 \$1.40 + \$1.40 = \$6.11 Christine: \$8.69 + \$1.25 - \$1.40 - \$1.80 = \$6.74
- 3. Lost tennis balls: 8 + 5 + 3 = 16 40 - 16 = 24 + 4 (found on court) = 28 tennis balls ALTERNATE: 40 - 28 = 12 tennis balls lost
- 4. Angelica: 63 13 + 7 = 57 charms

 Brittany: 49 + 13 7 = 55 charms

 ALTERNATE: Angelica had 2 more charms.
- **5.** \$2.39 + \$1.00 + \$.03 + \$.10 = \$3.52 ALTERNATE: \$3.50 - 2.39 = \$1.11
- 6. 28 × 5 = 140 balloons to start 140 - (24 + 11) = 105 left after losses 105 + 10 (from Ms. Penny's desk) = 115 balloons

Set 4 (pages 18-19)

- 1. 1993 (Diana's birth) 1939 (Grandma's birth) = 54 years old
- 2. 1985 + 12 = 1997 (year he sold the car) 1997 - 1957 = 40 years old
- 3. 18 9 = 9 years old
- **4.** 1994 2 = 1992 (year Sumi is born) 2000 – 1992 = 8 years old
- 5. 1995 1942 = 53 years old (grandfather's age) 1995 – 1968 = 27 years old (father's age)
- **6.** 1988 1960 = 28 years old ALTERNATE: 1988 1936 = 52 years

Set 5 (pages 20-21)

- 1. 2000 -191 = 1809
- **2.** 1938 37 = 1901
- **3.** 1800 57 = 1743
- **4.** 1954 18 = 1936
- **5.** 1881 25 = 1856
- **6.** 1791 + 9 = 1800

- **6.** $400 \times \$.50 = \200
- $400 \times \$.40 = \160

\$200 - \$160 = \$40 profit on bars

 $300 \times \$.30 = \90

 $300 \times \$.20 = \60

\$90 - \$60 = \$30 profit on apples

\$40 + \$30 = \$70 total profit

Set II (pages 32-33)

- 1. Saturday: 2 + 3 = 5 hours; $5 \text{ hours} \times \$3 = \15 Sunday: 1 + 2 = 3 hours; $3 \text{ hours} \times \$3 = \9 \$15 + \$9 = \$24
- \$4 for Partner and Poncho
 \$2 for Fifi and \$2 for Rowdy
 \$6 for Skipper, Mate, and Admiral
 \$4 + \$2 + \$2 + \$6 = \$14 for the day
 ALTERNATE: He earned \$2 more after lunch than he earned before lunch.
- 3. Leo worked 2 hours a day, 3 days a week, making \$4 an hour.

 $2 \times 3 = 6$ hours a week; 6 hours $\times $4 = 24 a week \$24 + \$24 = \$48

4. Week 1: 6 hours \times \$3 = \$18; week 2: 8 hours \times \$3 = \$24

Week 3: .5 hours \times 6 = 3 hours; 3 hours \times \$3 = \$9 \$18 + \$24 + \$9 = \$51

5. $$5 \times 3 \text{ dogs} = $15 \text{ (every week)}; $15 \times 4 = 60 in 4

 $$5 \times 4 \text{ dogs} = $20 \text{ (every other week); }$20 \times 2 = 40 in 4 weeks

\$60 + \$40 = \$100

6. 2 hours + 4 hours + 4 hours = 10 hours work 10 hours \times \$3 per hour = \$30 a week

Set 12 (pages 34-35)

- 1. $3 \times \$4.95 = \14.85 (total for shared dishes) $8 \times \$2.95 = \23.60 (total for individual dishes) \$14.85 + \$23.60 = \$38.45ALTERNATE: $\$38.45 \div 4 = \9.61 per person
- **2.** 2 × \$8.95 = \$17.90 \$17.90 + \$12.95 = \$30.85
- 3. $$7.99 \times 2 = $15.98 \text{ (cost of 2 adult meals)}$ $$4.99 \times 3 = $14.97 \text{ (cost of 3 child meals)}$ \$15.98 + \$14.97 = \$30.95
- **4.** \$.20 + \$.15 + \$.25 = \$.60 \$.60 × 4 people = \$2.40
- 5. $\$3.25 \times 4 = \13 (cost of specials) $\$.80 \times 6 = \4.80 (cost of eggs) \$13.00 + \$4.80 = \$17.80
- **6.** \$2.95 + \$1.95 = \$4.90; $$4.90 \times 2 = 9.80 (cost for boys)

\$3.95 + \$2.50 = \$6.45; $$6.45 \times 2 = 12.90 (cost for fathers) \$9.80 + \$12.90 = \$22.70

Set 13 (pæes 36-37)

- 1. \$10.00 \$3.25 \$1.70 \$1.50 = \$3.55 left Yes, he has enough to buy a magazine for \$2.70. ALTERNATE: \$3.55 - \$2.70 = \$.85
- 2. \$20.00 \$7.00 = \$13 to spend \$3.00 + \$5.00 = \$8 spent; \$13.00 - \$8.00 = \$5 Ruby does not have enough for the bag.
- 3. \$4.95 + \$.25 = \$5.20 (for the board game) \$25.00 - \$5.20 = \$19.80 (left to spend on coins) \$7.95 + \$.40 = \$8.35 for 1 packet of coins 3 will cost more than \$24; 2 will cost less than \$17.00; Lonnie can buy 2. ALTERNATE: \$19.80 - \$16.70 = \$3.10
- **4.** \$95.00 + \$11.00 = \$106 for bridle and book \$250.00 \$106.00 = \$144
- 5. $3 \times \$2.00 = \6 (cost of plants) $3 \times \$.75 = \2.25 (cost of pots) $2 \times \$3.95 = \7.90 (cost of soil) \$6.00 + \$2.25 + \$7.90 = \$16.15 (cost of all three) \$40.00 - \$16.15 = \$23.85ALTERNATE: \$23.85 - \$9.00 = \$14.85 left over
- **6.** \$20 + \$10 + \$15 = \$45 (total for purchases) \$575 \$45 = \$530 Yes, he can put \$500 in the bank.

Set 14 (pæes 38-39)

 $11 \times 2 = 22$ packages

- I. Amy needs 13 favors (12 guests and herself).
 Favors come in packages of 2, so she must buy an even number (14).
 14 favors ÷ 2 = 7 packages
 7 x \$.50 = \$3.50
- 2. $\$.59 \times 7 = \4.13 ALTERNATE: $\$.59 \times 3 = \1.77 (food for 3 cats for 1 day); $\$1.77 \times 7 = \12.39 (food for 3 cats for 1 week)
- 3. 2×5 fruit chews a week = 10 fruit chews a week $\$.39 \times 10 = \3.90
- **4.** $6 \times \$2.00 = \12.00 $\$12.00 \div \$.75 = 16$; she has enough for 16 fish.
- Assuming 4 weeks in a month: 4 x 4 batteries = 16 batteries
 Must buy 3 packs of 6 to get 16 (2 will be left over).
 3 x \$4.10 = \$12.30
- 6. \$.80 x \$.06 = \$.048 or \$.05; \$.80 + \$.05 = \$.85 (cost for 2 packages with tax) \$10 ÷ \$.85 = 11.76 2-pack sets (cannot buy fraction of a 2-pack set, so she can buy 11)

Set 15 (pæes 40-41)

- I. Cheddar per pound = \$1 (\$4.00 ÷ 4 pounds) String per pound = \$1.40 (\$2.80 ÷ 2 pounds) Swiss per pound = \$1.20 (\$3.60 ÷ 3 pounds) Cheddar is the best buy.
- \$1.69 ÷ 2 = \$.85 per battery; \$3.29 ÷ 4 = \$.82 per battery
 \$4.75 ÷ 6 = \$.79 per battery; \$5.99 ÷ 8 = \$.75 per battery
 The 8-pack is the best buy.
- 3. $\$.99 \div 50 = \$.02$ per foot for gold ribbon $\$3.00 \div 100 = \$.03$ per foot for red cord $\$1.20 \div 80 = \$.015$ per foot for green ribbon Green ribbon is the best buy.
- 4. Chocolate drops: \$2.50 ÷ 16 = \$.16 per ounce

 Mint chews: \$3.00 ÷ 48 (or \$1.50 ÷ 24) = \$.06 per ounce

 Caramels: \$1.50 ÷ 14 = \$.11 per ounce

 Mint chews are the best buy.
- 5. Butter cookies: \$2.99 ÷ 32 = \$.09 per ounce Sandwich cookies: \$4.99 ÷ 36 = \$.14 per ounce Butter cookies are the better buy.
- 6. Sweet potatoes: \$.89 ÷ 2 = \$.45 per pound (rounded up) White potatoes: \$1.29 ÷ 3 = \$.43 per pound Yellow potatoes are \$.49 per pound White potatoes are the best buy.

Set 16 (pages 42-43)

- 1. 3,900 1,552 = 2,348 miles
- 2. 50 yards x 3 = 150 feet (width of soccer field) 160 feet is more than 150 feet, so the football field is wider: ALTERNATE: football field: 360 feet x 160 feet = 57,600 square feet

soccer field: $300 \text{ feet} \times 150 \text{ feet} = 45,000 \text{ square feet}$ The football field has greater area.

- 3. 20 + 7 = 27 feet wide 40 feet + 38 feet = 78 feet 27 feet by 78 feet
- **4.** Jefferson School: $230 \times 120 = 27,600$ square feet Adams School: $220 \times 130 = 28,600$ square feet Adams School's playground has the larger area.
- **5.** 2.390 + 58 = 2.448 miles
- **6.** 19,850 + 470 = 20,320 feet

Set 17 (pages 44-45)

- 1. 1,900 + 1,700 + 1,400 + 1,300 = 6,300 feet climbed 7,574 6,300 = 1,274 feet left
- 2. 371 + 432 + 393 = 1,196 miles 1,560 1,196 = 364 miles

- 3. 2,000 + 1,286 + 1,400 = 4,686 miles $4,686 \div 300 = 15.62$ days or 16 days
- **4.** 42 + 48 + 36 + 47 = 173 miles 200 173 = 27 miles
- 5. 2 + 3 = 5 miles (one way); $2 \times 5 = 10$ miles (round-trip)
 - 5 days \times 10 miles = 50 miles
- 6. 1 + 1 = 2 miles each day round trip $9 \times 2 = 18$ miles

Set 18 (pages 46-47)

- 1. 15 minutes to mix
 - 5 minutes \times 6 batches = 30 minutes to get cookies ready
 - 15 minutes \times 6 batches = 90 minutes to bake 15 + 30 + 90 = 135 minutes or 2 hours 15 minutes 2:00 RM. + 2 hours 15 minutes = 4:15 RM.
- 2. 10:15 A.M. + 10 minutes + 15 minutes = 10:40 A.M. arrive at subway station
 10:40 A.M. + 3 minutes + 20 minutes = 11:03 A.M. arrive at streetcar stop
 11:03 A.M. + 6 + 15 = 11:24 A.M. arrive at library
 Yes, he's on time.
- 3. 9:30 A.M. + 35 minutes = 10:05 A.M.; 10:05 A.M. + 2 hours = 12:05 RM. 12:05 RM. + 20 minutes = 12:25 RM.; 12:25 RM.+ 1 hour = 1:25 RM.
- **4.** 4:15 RM. 1 hour = 3:15 RM.; 3:15 RM. 30 minutes = 2:45 RM. 2:45 RM. - 20 minutes = 2:25 RM.; 2:25 RM. - 4 hours = 10:25 A.M. 10:25 A.M. - 10 minutes = 10:15 A.M.; 10:15 A.M. - 10 minutes = 10:05 A.M.
- 5. 6:00 RM. 5 hours = 1:00 RM.; 1:00 RM. 30 minutes = 12:30 RM. 12:30 RM. - 45 minutes = 11:45 A.M.; 11:45 A.M. - 20 minutes = 11:25 A.M
- **6.** 9:30 A.M. + 15 minutes = 9:45 A.M.; 9:45 A.M. + $\frac{1}{2}$ minutes = 10:10 A.M.; 10:10 A.M. + 1 hour = 11:10 A.M.; 11:10 A.M. + 25 minutes = 11:35 A.M.

Set 19 (pages 48-49)

- 1. 290 miles ÷ 50 miles per hour = 5.8 hours

 ALTERNATE: .10 of an hour = 6 minutes; 6 minutes × 8

 = 48, so trip will take 5 hours and 48 minutes.
- 2. Family can take 8 days for driving (4 out and 4 back). 1,676 miles ÷ 4 days = 419 miles each day, each way
- **3.** 2,680 miles \div 600 miles per hour = 4.47 hours for the flight (or about $4\frac{1}{2}$ hours)
- **4.** 1,572 miles \div 3 days = 524 miles

75