

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

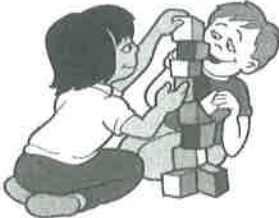








Until next time,

Your GT Coach

Poetry

see next page

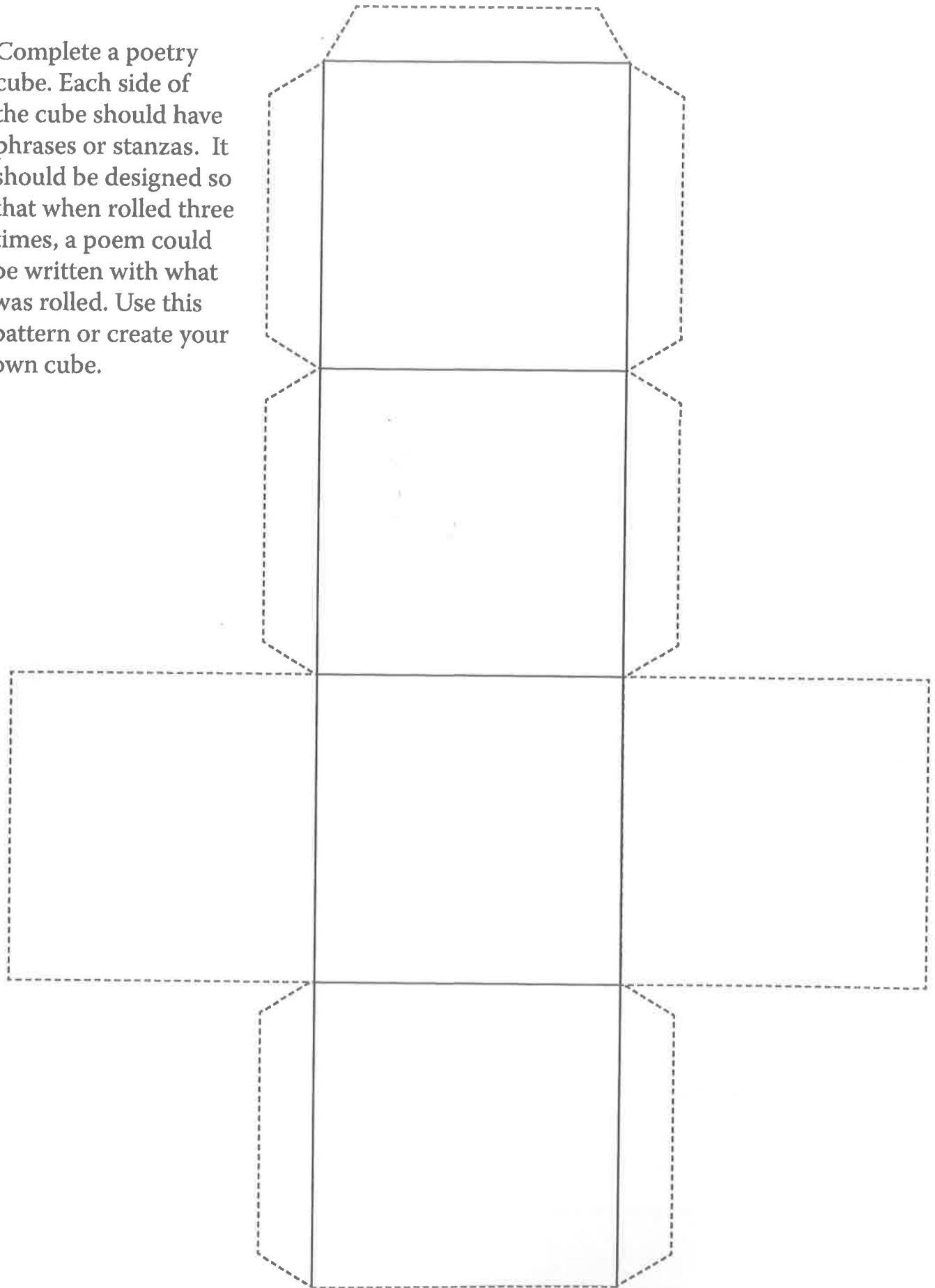
See 2nd page after this

<input type="checkbox"/> Create a Cube Create a poem cube with different stanzas on each side that when rolled could create a poem. 	<input type="checkbox"/> Design a Poster Research the history of the haiku poem. Make a poster that details your research and include three examples of this type of poem. 	<input type="checkbox"/> Write a Book Create a book of poetry with examples from at least three different poetry types (e.g., diamante, cinquain, haiku, name poems, free verse) 
<input type="checkbox"/> Create a Poem Write a poem about your classroom or classmates. Use either the diamante or the cinquain format. 	<input type="checkbox"/> Free Choice (Fill out your proposal form before beginning the free choice!) 	<input type="checkbox"/> Develop Your Own Song Choose one of your favorite poems and change it into a song or rap. Be prepared to share your creation with your classmates. 
<input type="checkbox"/> Illustrate a Poem Choose a poem from one of Shel Silverstein's poetry books. Create your own illustration for the poem you chose. 	<input type="checkbox"/> Your Own Poetry Challenge Write a poem in a format of your choice. 	<input type="checkbox"/> Design a Poster Gather information on how diamante, cinquain, and haiku poems are written. Create a poster that shows each poem's structure, as well as examples of each. 

Check the boxes you plan to complete. They should form a tic-tac-toe across or down.
 All products are due by: _____.

Poetry Cube

Complete a poetry cube. Each side of the cube should have phrases or stanzas. It should be designed so that when rolled three times, a poem could be written with what was rolled. Use this pattern or create your own cube.



Name: _____

Types of Poems

Cinquain Poem

Line 1—a one-word title (usually two syllables)

Line 2—two words that describe your title (usually four syllables)

Line 3—three verbs or a three-word phase that describes an action relating to your title (usually six syllables)

Line 4—a four-word phrase that describes a feeling related to your title (usually eight syllables)

Line 5—one word that is another word for your title (usually two syllables)

Chadwick
Funny Puppy
Running, Jumping, Barking
Chadwick—A Magnificent Dog
Scottie

Diamante Poem

Line 1—a one-word noun

Line 2—two adjectives that describe the noun in Line 1

Line 3—three action verbs relating to noun in Line 1

Line 4—four nouns that both words in Line 1 and Line 7 have in common

Line 5— three action verbs relating to noun in Line 7

Line 6—two adjectives that describes the noun in Line 7

Line 7—one-word noun that is opposite of the noun in Line 1

Sun
Warm, Bright
Shines, Heats, Creates
Weather, Beach, Children, Outdoors
Cools, Waters, Feeds
Fresh, Welcome
Rain



Haiku Poem





Line 1—a five-syllable line

Line 2—a seven-syllable line

Line 3—a five-syllable line

Rain, it softly falls
Trees thirst and drink greedily
The forest sings out.

Reference Materials

<input type="checkbox"/> Dictionary Skills You can always find a word in the dictionary by flipping from page to page, but this is not the most efficient manner of finding words. Create a poster showing strategies and examples to quickly find words. 	<input type="checkbox"/> Thesaurus Skills The thesaurus is a great resource for expressive language. Using the thesaurus, create a mobile with the words <i>great</i> , <i>wonderful</i> , and <i>big</i> as the top words. Under each provide at least five other words for each.	<input type="checkbox"/> Glossary Skills The glossaries of your textbooks have gotten together and formed a complaint committee. They are very unhappy that students do not use them. Create an advertisement for their campaign to encourage students to use them.
<input type="checkbox"/> Glossary Skills Create a scavenger hunt through one of your books using the glossary as your starting point and ending point. Have students find pages based on your clues. Have fun with its design!	<input type="checkbox"/> Free Choice (Fill out your proposal form before beginning the free choice!) 	<input type="checkbox"/> Thesaurus Skills Write a letter to a friend telling about the exciting uses for words found in a thesaurus. Be sure and include a few new words in your letter as examples.
<input type="checkbox"/> Thesaurus Skills Choose a picture from a magazine you would like to describe. Using a thesaurus, write a descriptive paragraph for the picture using all new words as descriptors.	<input type="checkbox"/> Glossary Skills Create a brochure or pamphlet that shows the structure of a glossary, as well as the benefits to using one. 	<input type="checkbox"/> Dictionary Skills Create a recipe card for the proper use of a dictionary to find words. Be creative! 

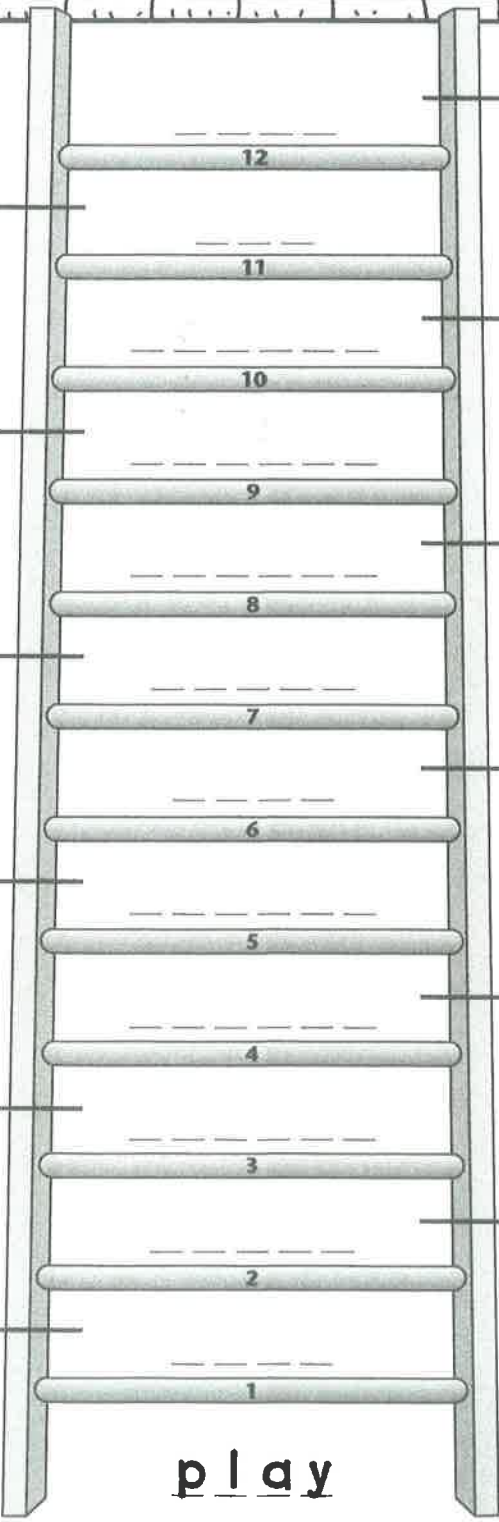
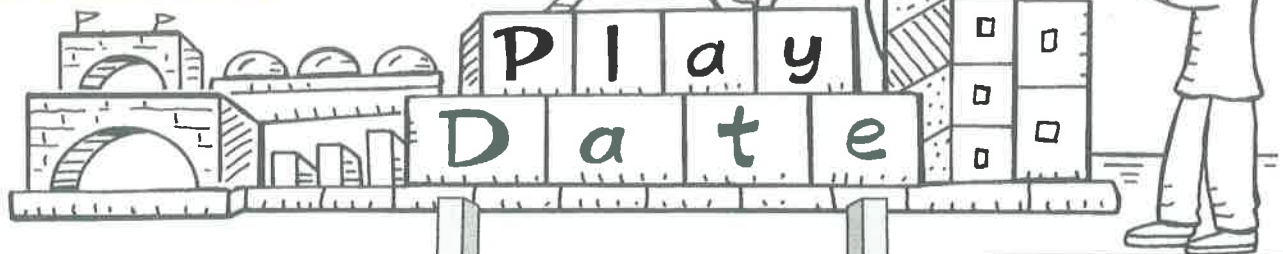
Check the boxes you plan to complete. They should form a tic-tac-toe across or down.
 All products are due by: _____.

Name _____




Read the clues, then write the words.

Start at the bottom and climb to the top.



To make music with your lips closed.
Take away three letters.

A low, heavy, rolling sound.
Change one letter.


 A leisurely walk.
Add one letter after the a.


A building where horses and sheep are housed.
Change one letter.

Another word for dishes.
Take away one letter, then add two more.

Something you make to help you reach a goal.
Change one letter.

Another word for friend or pal.
Add one letter.

 Not proud. Modest.
Change the first letter.

 To go for a long walk without direction.
Add one letter to the beginning.

If you're ___ to do something, you can do it.
Take away two letters.

Use this to hold papers together.
Rearrange the letters.

Short for *airplane*.
Add one letter.

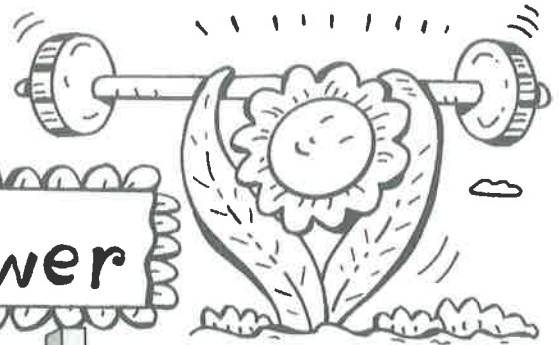
Name _____

Read the clues, then write the words.

Start at the bottom and climb to the top.




Flower Power




To move along smoothly,
like a river.
Add one letter.

When you meet someone
you might ask, "___ are
you?"
Take away one letter.

To push.
Change one letter.

 To cover a road with a material
like asphalt or concrete.
Change one letter.

 A thin, flat piece of wood.
Rearrange the vowels.


Where you put your
foot on a bike.
Change one letter.


This has petals.
Add two letters.

Not high.
Change one letter.

To exhibit something to
others.
**Take away the last two
letters, then add one.**

To remove hair.
**Take away one letter,
then add two.**

 A sheet of glass in a
window.
Take away one letter.

 To punish is to ___ize
someone.
**Change the middle
letter.**

12 _____

11 _____

10 _____

9 _____

8 _____

7 _____

6 _____

5 _____

4 _____

3 _____

2 _____

1 _____

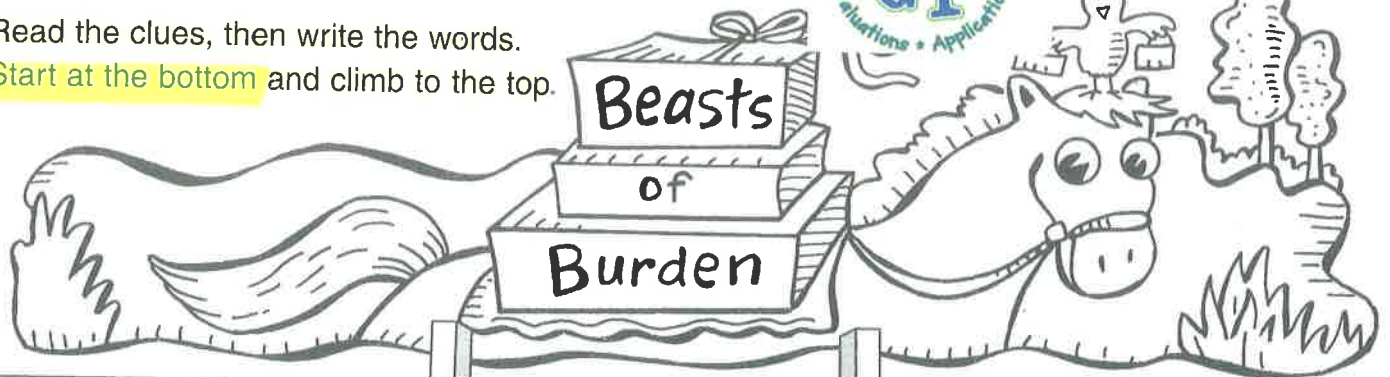
p e t a l

Name _____



Read the clues, then write the words.

Start at the bottom and climb to the top.



A desert animal.
Add one letter.

9

To have come.
Change one letter.

8

To be concerned about
someone or something.
Change one letter.

7

A female horse.
Change one letter.

6



Nothing more than. He was
a ___ child when he wrote
the book.
Change the first vowel.

5

Opposite of less.
Change one letter.

4

The middle part of an apple.
Take away one letter.

3

A job done around
the house.
Change one letter.

2

The edge of the ocean
or a lake.
Rearrange the letters.

1

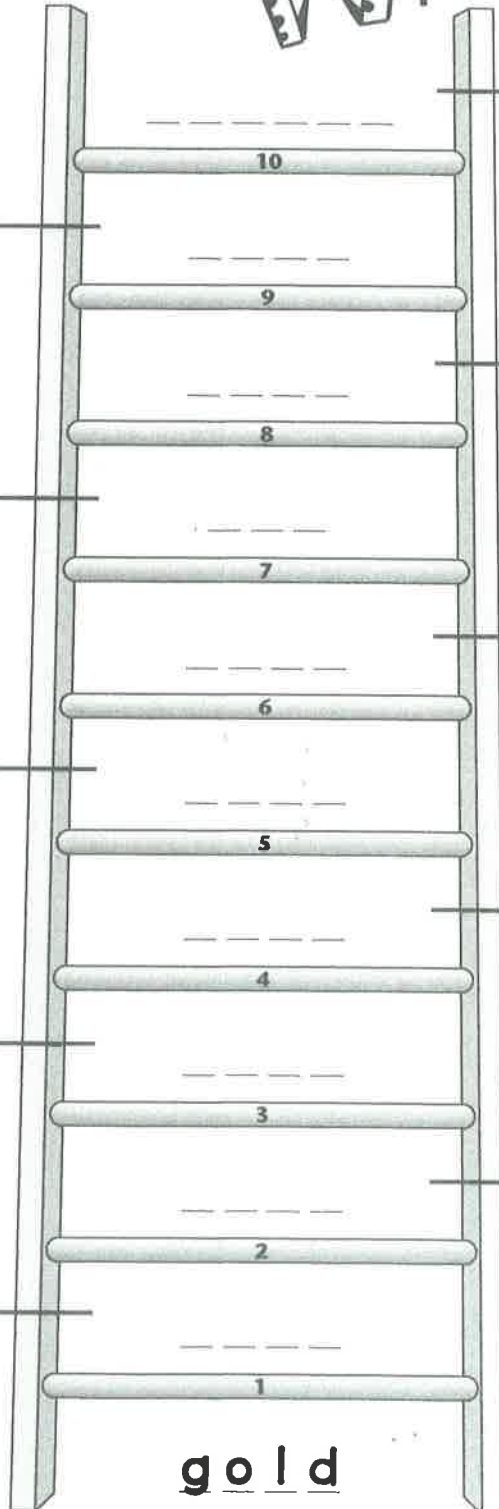
h o r s e

Name _____

Read the clues, then write the words.
Start at the **bottom** and climb to the top.




Medal Winners



In grammar, this is an *action word*.
Change one letter.


Refers to a girl or woman.
Take away the last two letters, then add one.

 The main part of a ship.
Change one letter.

A white bird that lives near the ocean.
Change one letter.


A game played on an outdoor course with tees.
Change one letter.

A precious metal other than gold.
Add three letters to the beginning; take away one at the back.

 A plant you can use to cook with.
Add one letter to the end.

The back of your foot.
Change the middle two letters.

The opposite of push.
Change one letter.

 A part of the ocean that extends into the land.
Change the vowel.

Homophones

Name _____

Review 2: Analogy Relationships

Read the first word pair of the analogy. Write the phrase from the box that tells how the words are related. Then choose the correct word to complete the analogy.

Relationships:

Synonyms

Antonyms

Homophones

1. role : roll :: scull : _____ Relationship: _____
(A) scroll (B) scrawl (C) skill (D) skull
2. input : output :: liberal : _____ Relationship: _____
(A) outcome (B) library (C) free (D) conservative
3. rural : urban :: infrequent : _____ Relationship: _____
(A) rare (B) often (C) suburban (D) regular
4. generous : unselfish :: difficult : _____ Relationship: _____
(A) easy (B) selfish (C) different (D) troublesome
5. fidelity : faithfulness :: clamor : _____ Relationship: _____
(A) shout (B) clamp (C) unfaithful (D) whisper
6. mall : maul :: raze : _____ Relationship: _____
(A) shop (B) shave (C) lower (D) raise
7. wood : would :: eye : _____ Relationship: _____
(A) see (B) aye (C) banned (D) I'll
8. conquer : overcome :: vagrant : _____ Relationship: _____
(A) vacant (B) vague (C) vanquish (D) vagabond



THINK!

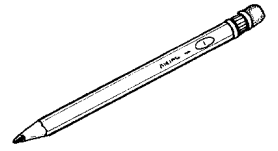
Tell a partner why it is important to recognize how the words in the first set of an analogy are related.

Example and Class

Name _____

Reviewing Example and Class

Things can be grouped or classed together because they are alike in some way. Write two examples from the box for each class below.



spinach	latitude	landscape	trapezoid	democracy	computer
dictatorship	radius	flannel	fable	century	isthmus
decade	lathe	sonnet	eggplant	corduroy	portrait

- Governments _____
- Fabrics _____
- Machines _____
- Vegetables _____
- Time _____
- Mathematics _____
- Literature _____
- Painting _____
- Geography _____



THINK!

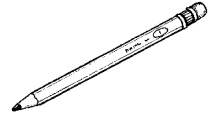
Think of another example for each class.

Object/Function

Name _____

Reviewing Object/Function

Things are often associated with their function. Write two examples from the box under each function below.



harp	door	knife	saxophone	helicopter	broom
elevator	oven	shovel	inline skates	jet	forklift
wagon	scissors	mop	spade	window	furnace

1. Things That Cut _____
2. Things That Dig _____
3. Things That Open _____
4. Things That Make Music _____
5. Things That Roll _____
6. Things That Heat _____
7. Things That Fly _____
8. Things That Lift _____
9. Things That Clean _____



THINK!
Think of another item that performs each function.



Patch-Word Quilt of Preposition Idioms

Integrate the study of idioms into your study of prepositions by creating a large, class-made patch-word quilt bulletin board.

What to Do



- MATERIALS**
- copies of the directions (page 46)
 - 9- by 12-inch construction paper (light colors work best)
 - scissors
 - glue sticks
 - colored markers
 - ruler
 - stapler

1. Give each student a copy of the directions and two pieces of construction paper.
2. Ask students to choose a preposition-related idiom. (See the suggested idioms on the next page.) Then, have them follow the direction on page 46 to create a quilt patch.
3. After students have finished their patches, staple them next to one another on a bulletin board, alternating colors, to create a large class quilt.
4. Add a banner such as “Patch-Word Prepositions.”

Try This Idea!

You can also use this activity to feature other parts of speech. Look through the glossary on page 55 to find idioms that feature verbs, nouns, adjectives, and so on.

Suggested Idioms

Above

- ◆ Head and shoulders above someone
- ◆ Keep your head above water

Against

- ◆ Go against the grain
- ◆ Play both ends against the middle
- ◆ Up against the wall

Away

- ◆ Get away with murder
- ◆ When the cat's away, the mice will play

Behind

- ◆ Behind the eight ball
- ◆ Power behind the throne
- ◆ Wet behind the ears

Below

- ◆ Below par
- ◆ Hit below the belt

Between

- ◆ Between a rock and a hard place
- ◆ Read between the lines

By

- ◆ By the skin of your teeth

Down

- ◆ Bring down the house
- ◆ Down the drain
- ◆ Down the hatch
- ◆ Look down your nose at someone

For

- ◆ Go along for the ride

In

- ◆ Down in the mouth
- ◆ In the driver's seat
- ◆ In hot water

Of

- ◆ Out of sight, out of mind
- ◆ Out in left field
- ◆ Out of the clear blue sky
- ◆ Out of the frying pan, into the fire
- ◆ Out of the mouths of babes
- ◆ Out of the woods

Off

- ◆ Off the beaten track
- ◆ Off the top of your head
- ◆ Off-the-wall
- ◆ Off your rocker

On

- ◆ Jump on the bandwagon
- ◆ Out on a limb
- ◆ Quick (or slow) on the draw

Over

- ◆ Over a barrel
- ◆ Over the hill
- ◆ Over your head

To

- ◆ Down-to-the-wire

Under

- ◆ Get under your skin
- ◆ Take someone under your wing
- ◆ Water under the bridge

Up

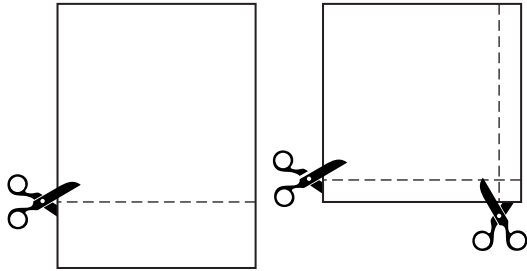
- ◆ Up a creek without a paddle

Patch-Word Quilt of Preposition Idioms

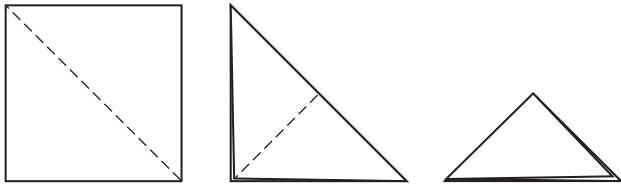
Follow the directions below to create a quilt patch that features a preposition idiom of your choice.

Directions for Making the Quilt Patch

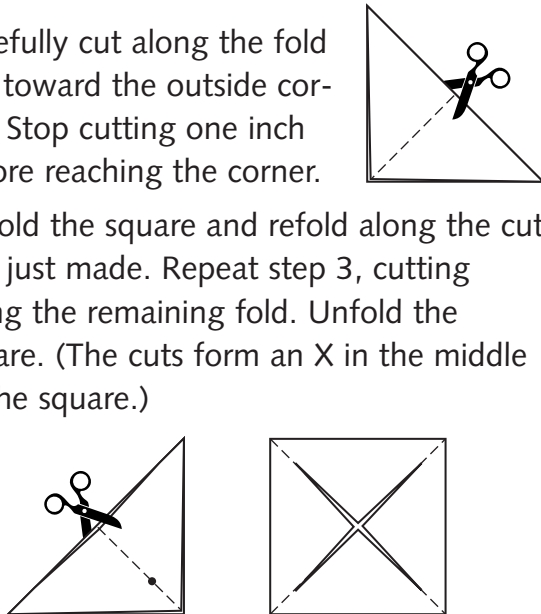
1. Cut a 3-inch strip off two pieces of construction paper, as shown, leaving two 9-inch squares. Then cut one inch off two sides of one square, leaving an 8-inch square.



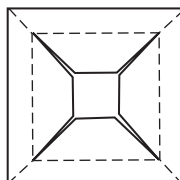
2. Fold the 8-inch square in half diagonally. Then fold it in half again. Unfold the last fold, so the square is still folded in half.



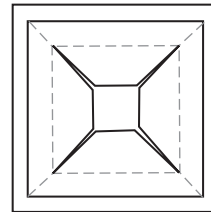
3. Carefully cut along the fold line toward the outside corner. Stop cutting one inch before reaching the corner.
4. Unfold the square and refold along the cut you just made. Repeat step 3, cutting along the remaining fold. Unfold the square. (The cuts form an X in the middle of the square.)



5. Fold the four triangular flaps back and forth. Cut 1/2 inch off the points of each flap, leaving a square window.



6. Rub a glue stick around the outer edges of the square and glue it in the center of the 9-inch square. The flaps will hide your writing on the construction paper below.

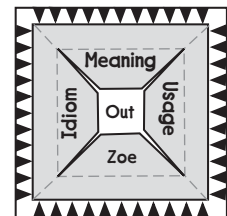


Directions for Writing About the Idiom

1. Choose an idiom containing a preposition to highlight on your quilt patch and write the preposition in the center window of the patch. On the tops of three triangular flaps, write the following labels: Idiom, Meaning, Usage. Write your name on the fourth flap.
2. Under the flap labeled Idiom, write the idiom you selected.
3. Under the flap labeled Meaning, write an explanation of the idiom's meaning.
4. Under the flap labeled Usage, use the idiom in a sentence that conveys the idiom's meaning.
5. Under the flap with your name, write a short description of a way in which the idiom could be applied to some aspect of your life.

For Fun

Decorate the outer borders of your quilt patch.





Like Two Peas in a Pod

Many idioms go together “like two peas in a pod” because they have the same basic meanings. Write each idiom from the list below in the square with the idiom that shares its meaning.

- ♦ **Bite the bullet**
- ♦ **If at first you don't succeed, try, try again**
- ♦ **Butterflies in the stomach**
- ♦ **Let the cat out of the bag**
- ♦ **Chip off the old block**
- ♦ **Make hay while the sun shines**
- ♦ **Don't open a can of worms**
- ♦ **On cloud nine**
- ♦ **Everything but the kitchen sink**
- ♦ **Up a creek without a paddle**
- ♦ **Go over with a fine-tooth comb**
- ♦ **Wild-goose chase**

1. Face the music	7. On top of the world
2. Needle in a haystack	8. On pins and needles
3. From soup to nuts	9. Rome was not built in a day
4. In the doghouse	10. Spill the beans
5. Leave no stone unturned	11. Spitting image
6. Let sleeping dogs lie	12. Strike while the iron is hot



Birds of a Feather Flock Together

Many idioms flock together “like birds of a feather” because they have the same basic meanings. Write each idiom from the list below in the square with the idiom that shares its meaning.

- ◆ Bats in your belfry**
- ◆ Don't count your chickens before they've hatched**
- ◆ Go against the grain**
- ◆ Shoot the breeze**
- ◆ Take a backseat**
- ◆ Go fly a kite**
- ◆ Hit the roof**
- ◆ Out of the clear blue sky**
- ◆ Cost an arm and a leg**
- ◆ In the driver's seat**
- ◆ Rock the boat**
- ◆ That's the way the ball bounces**

1. Blow your stack	7. Off your rocker
2. Call the shots	8. Pay through the nose
3. Chew the fat	9. Play second fiddle
4. Don't put the cart before the horse	10. Rub the wrong way
5. Go jump in a lake	11. That's the way the cookie crumbles
6. Make waves	12. Bolt from the blue



Scrambled Idioms

All of the idioms below have been cut in half. Match each beginning to its proper ending by writing an ending from the box on the correct line.

be choosers	run deep
come home	skin a cat
come to it	spite your face
eat it too	spoil the broth
fly right	spoil the child
fry an egg	swim
hatch	throw stones
make him drink	

1. Go _____
2. There's more than one way to _____
3. Don't count your chickens before they _____
4. Too many cooks _____
5. Still waters _____
6. Have your cake and _____
7. You can lead a horse to water but you can't _____
8. Straighten up and _____
9. Cross that bridge when you _____
10. Sink or _____
11. People who live in glass houses shouldn't _____
12. Spare the rod and _____
13. Till the cows _____
14. Cut off your nose to _____
15. Beggars can't _____

Logic With a Matrix

Using a matrix to organize information is a great way to solve certain logic problems. A matrix helps students isolate the information that is helpful in solving the problem and eliminate the information that is no longer needed. Logic problems that have three variables have a very different looking matrix. Without this visual representation, information is difficult to remember and consequently difficult for students to use.

The following is a teacher/students exchange from a fifth-grade classroom where students are solving the first problem in this section of the book.

Teacher: Today we are solving a different kind of logic problem and will use something called a matrix to help us solve it.

Show students the first problem and the matrix and ask them to tell you what they see.

Student: The matrix is like a square with different parts.

Student: There are names across the top of the matrix and different kinds of drinks along the side.

Student: The squares in the middle are empty.

Teacher: Will someone read the logic problem and then I'll read one clue at a time and we can use the matrix to solve it.

Have a student read the problem out loud and then read the first clue.

Student: What does it mean that Jamie and Sandy are good friends? What does that have to do with which drink they like best?

Teacher: Does anyone think they know how this clue helps us solve the problem?

Student: I think that it means that Jamie and Sandy can't be the people who like skim milk the best because they are friends with that person. So Jessie has to be the person who likes skim milk the best. Jamie and Sandy are good friends with Jessie who likes skim milk the best.

Teacher: Does that make sense to all of you? What can we put in the matrix to help us remember that it's Jessie who likes skim milk the best? We also need to put something in the matrix to help us remember that Sandy and Jamie do not like skim milk the best.

Student: You could put a check where Jessie and skim milk come together and then put an \times in the same row under Sandy and Jamie.

Student: Or you could color in the place to show that Jessie is the skim-milk person and put an \times under Sandy and Jamie.

Student: You also need to show that Jessie can't like any of the other drinks the best. So you'll need to draw \times 's underneath Jessie's name.

Teacher: Why don't I color in the place where it shows that Jessie likes skim milk the best?

Then it will be easy to see that Jessie is the skim-milk person. I'll put ×'s to show that no other person can have skim milk as their favorite drink, and to show that Jessie cannot like any of the other drinks as his favorite. The next clue says, **Sandy likes a beverage that has an odd number of letters.** Take ten seconds to think about this and then whisper what you think to your partner.

Once students have had this time, call on several students to share their ideas.

Student: Spring water and orange juice both have an odd number of letters. There's eleven letters in both of these drinks.

Teacher: So, what does that mean?

Student: It means that we still don't know which person likes which drink the best.

Teacher: OK. Let's read the next clue. **Jamie does not like fruit juices.** What does this clue tell us?

Student: This means that Jamie can't like orange juice. Orange juice is a fruit juice.

Teacher: So, what do I need to do on the matrix?

Student: You need to put an × where it shows Jamie and orange juice. Then you can color in where it shows Jamie and spring water. If he doesn't like orange juice the best, then he has to like spring water the best.

Teacher: OK. Now do we know which beverage Sandy likes the best?

Student: When you put an × under Jamie and orange juice that just leaves Sandy and orange juice. So, Sandy likes orange juice the best. Color in that square.

Teacher: Let's look at the matrix and see if it shows us who likes which beverage the best. You'll need to record your answers so it's easier to see them. Look over the matrix and reread the clues, checking to see that the answers make sense.

The 18 logic problems that follow include matrices for students to use to solve them.



Logic With a Matrix

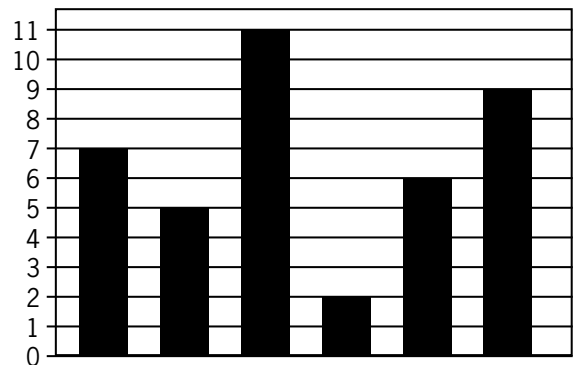
Use the matrices to solve the problems.

13. Brian, Henry, Ernest, Chris, and Peter each wrote a different addition problem to challenge their friends. The problems that they wrote were $479 + 1,356 =$; $4,782 + 999 =$; $508 + 948 =$; $1,644 + 777 =$; and $827 + 699 =$. Use the clues below to determine which child wrote which problem.

- Ernest chose his problem because it has a sum that is even and the words *even* and *Ernest* both begin with an *e*.
- The sum for Chris’s problem is less than Ernest’s sum.
- Brian and Henry ate lunch with the boy who had the smallest, odd sum.
- If you rounded Brian’s sum to the nearest thousand it would be 6,000.

	Brian	Henry	Ernest	Chris	Peter
$479 + 1,356 =$					
$4,782 + 999 =$					
$508 + 948 =$					
$1,644 + 777 =$					
$827 + 699 =$					

14. Julie, Kim, J.M., Robbie, Matt, and David collected data and represented it with the bar graph shown. Use the clues to figure out how to label the horizontal axis of this bar graph.



- Robbie and Julie rolled a six an even amount of times.
- Matt, David, and Kim were surprised when their friend rolled a six more than anyone else.
- Kim rolled a six two fewer times than J.M.
- If you add Matt’s rolls of six to J.M.’s. rolls of six, the sum is 18.
- If you subtract Robbie’s rolls of six from David’s rolls of six, the difference is 3.

	Julie	Kim	J.M.	Robbie	Matt	David
7						
5						
11						
2						
6						
9						

Logic With a Matrix

Use the matrices to solve the problems.

15. Four fifth-graders—Mikhael, Sondrah, Charleen, and Yolanda—compared their home telephone numbers. Use the clues to determine which student has which telephone number.

- Sondrah and Yolanda both have a telephone number whose digits sum to 31.
- If you subtract the sum of the first three digits of Mikhael's telephone number from the sum of the second four digits of his number, the difference is 17.
- Sondrah's telephone number has only two even digits.

	Mikhael	Sondrah	Charleen	Yolanda
817-3624				
356-1178				
523-8199				
631-2140				

16. Kevin, Earl, and Marvin each has a pet that can do a special trick. The tricks are that one can stand on only two legs with the other two in the air, one can jump through a hoop, and one can jump over a barrel. The pets' names are Harry, Bozo, and Sport. Use the clues to figure out which boy has which pet and which trick the pet can do.

- Kevin and Earl walk to the mall with the boy who owns Harry.
- Bozo's owner has the same number of letters in his name as his pet does.
- Sport cannot jump.
- Marvin's pet can jump through things but not over things.

	Kevin	Earl	Marvin	Standing	Jumping hoop	Jumping barrel
Harry						
Bozo						
Sport						
Standing						
Jumping hoop						
Jumping barrel						

Logic With a Matrix

Use the matrix to solve the problem.

17. Wanda, Rita, Barbara, and Greta each wore a university sweatshirt. The sweatshirt colors that they wore were white, red, blue, and green. The names on the shirts were Washington State University, Rhode Island State University, Brown University, and Georgetown University. No two sweatshirts were the same color or had the same name on it. Use the clues below to figure out who wore which color sweatshirt and which name is on each sweatshirt.



- No person's shirt had a color or a name with the same letter as the person's name.
- Rita and Greta are friends with the girl who wore the red Washington State University sweatshirt.
- Wanda does not like the colors green and white.
- Rita's green shirt has the fewest number of letters on it.
- Rita's Brown University sweatshirt is not white.

	Wanda	Rita	Barb	Greta	White	Red	Blue	Green
Washington State								
Rhode Island								
Brown								
Georgetown								
White								
Red								
Blue								
Green								

Logic With a Matrix

Use the matrix to solve the problem.

18. During her eight-week summer vacation, Amber traveled to a different city each week. The cities she visited were Seattle, Denver, Kansas City, Omaha, Charlotte, Baltimore, Atlanta, and Washington, D.C. Use the clues to figure out which city she visited each week of her vacation.



- Amber began her trip by visiting the city which is about 50 miles north of Washington, D.C.
- Amber did not go to Washington during the second week of vacation. Instead she flew to Georgia.
- She visited the White House during her fourth week of vacation.
- On the third week of her vacation, Amber visited the city that is in the same state as Greensboro and Raleigh.
- Amber visited Omaha after going to Charlotte, but not before spending time in Kansas City.
- During the seventh week, Amber traveled all the way to the west coast before visiting her Uncle Sydney in Denver.

	1 st	2 nd	3 rd	4 th	5 th	6 th	7 th	8 th
Atlanta								
Baltimore								
Charlotte								
Denver								
Kansas City								
Omaha								
Seattle								
Washington, DC								

Logic Using a Venn Diagram

Venn diagrams, developed by Englishman John Venn (1834–1923) are a powerful problem-solving tool allowing students to display attributes or information from two or three different sets. Teachers often use this visual representation when discussing the characters in a piece of literature or when making observations about things in science class. The Venn diagram logic problems that follow provide students with problems where they will have to add and/or subtract to figure out answers. In most cases the Venn diagram provides them with a means of seeing how the information from the problem will look.

The following is a teacher/students exchange from a sixth-grade classroom. This will help you see how to use these problems with your own students.

Teacher: Think of something you can say about this.

Show students the Venn diagram and ask them to describe what they see.

Student: There are two ovals that cross over each other.

Student: The ovals are empty.

Teacher: Has anyone ever used one of these before, or seen one of these?

Student: We use these to write characteristics of characters in a book. Sometimes two characters have characteristics that are the same and you write those in the middle part.

Student: The middle part means that the information is the same for both of the characters.

Teacher: Has anyone used these in any other classes?

Student: We used them in math class in third grade when we did data collection.

Teacher: So, this diagram has a special name. It's called a Venn diagram. It's actually named after a man named John Venn who used these to solve logic problems. We're going to use them to solve logic problems, too.

Show the first logic problem to the students and ask them to silently read the information that is given to them.

Teacher: Let's label the two ovals to help us organize the information from the problem. Think about what this (*Point to the first oval.*) might have as its label.

Student: You need to write the name of one of the favorite flavors of ice cream on top of each of the ovals.

Teacher: So, this loop will represent the students who like fudge swirl as their favorite flavor of ice cream and this oval will represent the students who like chocolate chip as their favorite flavor.

Add the labels.

Student: It says that 5 children only liked chocolate chip.

Teacher: Where should we write the number 5 to show that this amount of people only liked chocolate chip?

Student: You need to put it inside the loop that says *chocolate chip* in the part that doesn't overlap with the *fudge swirl* loop.

Teacher: How did you know that this would be the best place to put the 5?

Student: The overlapping part would be for people who couldn't make up their mind, and they said that they liked both chocolate chip and fudge swirl the same.

Teacher: OK. Would someone read the next clue?

Student: 8 children only liked fudge ripple.

Teacher: So, where should we write the number 8?

Student: The 8 needs to be inside the other loop in the part that doesn't overlap.

Student: 8 people liked only one kind of ice cream best.

Teacher: Would someone read the next statement?

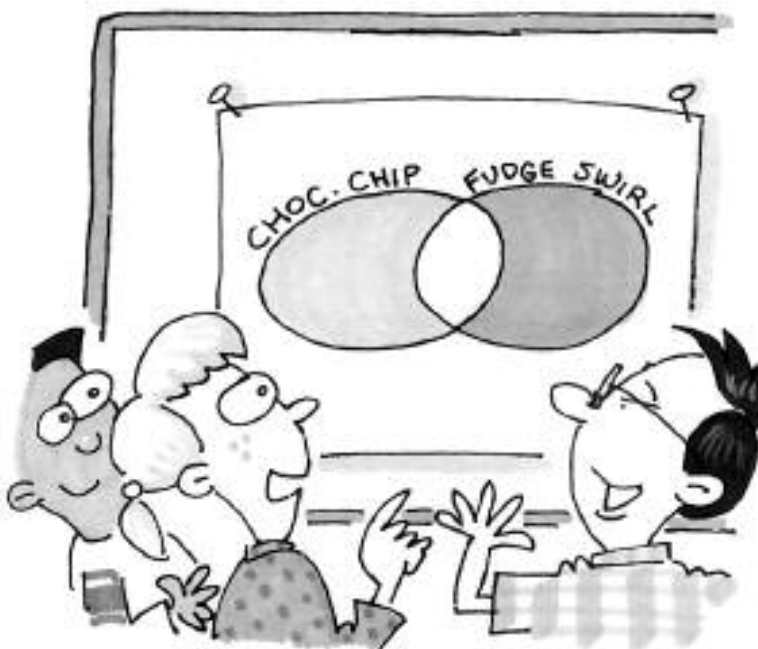
Student: Some children liked them both the same.

Teacher: What do we know from this clue?

Student: We know that there needs to be a number in the middle, but we don't know what this number is yet.

Teacher: Let's look at the last clue and see if it helps us figure out how many students will need to go in the center. Would someone read the last clue?

Student: 22 children were surveyed.



Teacher: Talk with your partner and take a minute to figure out how many people will go in the intersection of the two loops.

Give children a minute to do this. After someone has given an answer be sure to ask them how they figured out the answer they shared.

Student: The number 9 has to go in the center.

Teacher: Did anyone get a different answer?

Teacher: How do you know that 9 is the correct amount?

Student: If you add the 5 and the 8 that equals 13. But the last clue says that a total of 22 students were surveyed. So, I subtracted 13 from 22 and that equals 9. So, 9 students liked both chocolate chip and fudge swirl the same.

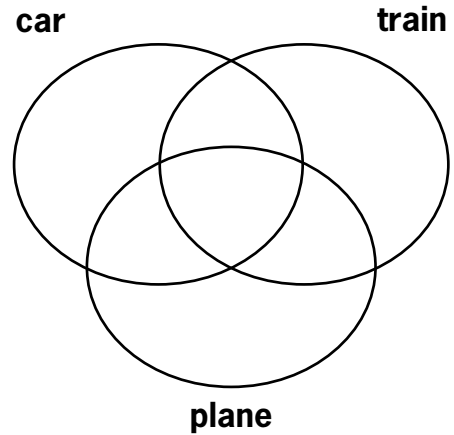
The following Venn diagram problems can be used as a "warm-up" before beginning mathematics class or they can be used as independent work or paired work for students.

Logic Using a Venn Diagram

Use the Venn diagrams to display these results and answer the questions.

7. When asked which method of transportation 43 New Yorkers had used when traveling to Washington, D.C., in the last year, the following data was collected.

- 31 people said that they had traveled by train.
- 9 people said they had traveled by plane and train.
- 7 people said they had driven and gone by train.
- 4 people said they had only traveled by car.
- A total of 17 people said plane.
- Only 11 people said automobile.
- No one said they'd traveled by plane, train, and automobile.



How many people said only train? _____

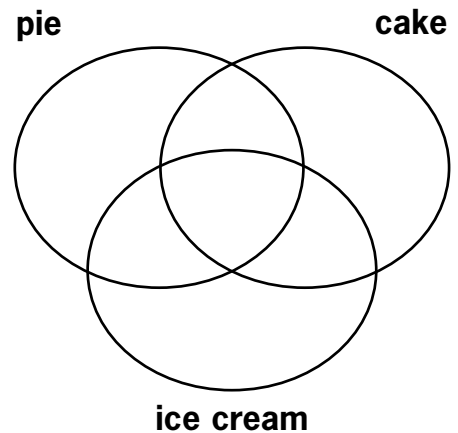
How many people said only plane? _____

How many people said only car? _____

Did anyone say plane and auto? _____

8. 200 students responded to a survey about desserts they liked.

- 20 people said just pie.
- 11 people said only ice cream.
- 31 people liked cake, pie, and ice cream equally.
- 59 people said when given a choice, they'd pick either cake or pie.
- 110 people liked cake with 8 people saying they like cake only.



How many people said ice cream and pie? _____

How many people said both cake and ice cream? _____

Logic Using a Venn Diagram

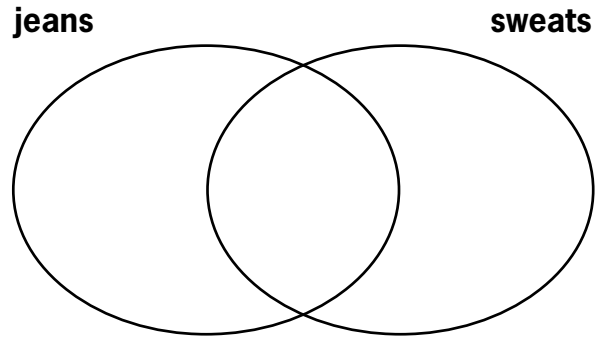
Use the Venn diagrams to display these results and answer the questions.

9. When asked which was more comfortable to wear to school, 31 students said that they liked to wear either sweats or jeans.

The same number of people said that they liked only jeans or said that they liked only sweats.

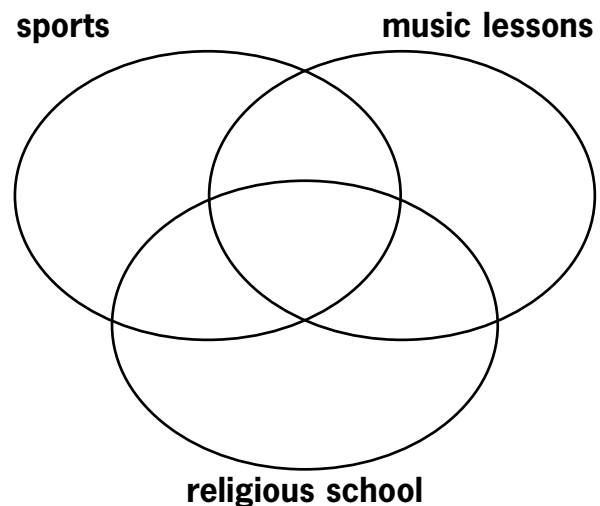
If a total of 59 people responded, how many people said jeans? _____

How many people said sweats? _____



10. Afterschool students listed different activities that they did. Some students did more than one activity.

- 27 students had a music lesson, some sports activity, as well as religious school during the week.
- 39 students had both religious school and music lessons.
- 37 students had both religious school and some athletic activity.
- 30 more students had an athletic activity and a music lesson as the number of students who had a sport and religious school.
- A total of 84 students mentioned sports.
- A total of 51 students said religious school.
- 106 students responded.



Date _____

Name _____

Problem Solving: Working Backwards

Mark and Darcy's Game

Mark and Darcy made their own dartboard, then played a few games. Their dartboard was not designed like a typical board. For one thing, it was not round but rectangular! Here is what it looked like (the numbers inside each square indicate the points a spot is worth). Answer the questions below based on the information found on the dartboard. In some cases, there is more than one correct answer.

15	17	18	20	20	20	18	17	15
17	25	25	27	27	27	25	25	17
18	25	30	33	35	33	30	25	18
20	27	33	37	40	37	33	27	20
20	27	35	40	50 BULL'S EYE	40	35	27	20
20	27	33	37	20	37	33	27	20
18	25	30	33	35	33	30	25	18
17	25	25	27	27	27	25	25	17
15	17	18	20	20	20	18	17	15

- Darcy landed on a 33 on her first toss. Mark tied her in 2 tosses. On what spots did he land? _____
- Mark got a bull's eye. Darcy tied him in 3 tosses. On what spots could she have landed? _____
- Darcy got a bull's eye. Mark tied her in 2 tosses. On what spots could he have landed? _____
- Darcy had 127 points. Could Mark beat her in 3 tosses, without a bull's eye? _____
- When Mark wasn't looking, Darcy claimed she got 95 points in 2 tosses. Was she tricking him? _____
- Mark had 81 points when Darcy tied him in 3 tosses. On what spots could she have landed? _____

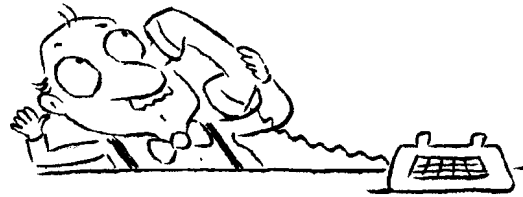
Date _____

Name _____

Logic and Reasoning

Oops, Wrong Number

Below is a list of wrong numbers. For each wrong number, use the clue to determine the number the caller meant to dial.



Wrong number	Clue for correct number	Correct number
1. 914-4258	completely reverse the order	
2. 451-1362	reverse the two sets of numbers whose sum is 9	
3. 654-6922	change every even number to its half	
4. 288-2537	replace odd numbers with the next highest even number	
5. 486-2427	change any number that can be evenly divided in half to a 6	
6. 250-7337	triple every number less than 4	
7. 529-7395	rewrite the numbers in ascending order	
8. 815-6224	subtract the last number from the first number and change any numbers evenly divisible by 2 to product of 2×2	
9. 273-1561	reverse the two numbers whose product is 30 and reverse the two numbers whose product is 14	
10. 455-6859	replace certain numbers so you'll end up with a number pattern of plus one, minus two	

YOUR TURN

Make up a phone number as the wrong number, and create a clue for a friend or family member to determine the correct number.

5.NBT.7

name: _____ Date: _____

Adding & Subtracting Decimals

Find two numbers that have a sum of 77.95 and a difference of 30.61...

and

Work Space:

Explain how you found the two numbers...

5.NBT.7

name: _____ Date: _____

Multiplying & Dividing Decimals

Find two decimals that have a product of 0.2 and a quotient of 0.8...

and

Work Space:

Explain how you found the two numbers...

5.MD.5

Name: _____ Date: _____

Volume of Rectangular Prisms

Use equations and illustrations to solve each...

Martha packed a box with a volume of 336 cubic inches. If the box is 8 inches wide and 7 inches high, what is the length of the box?

Bobby built a planter with a volume 36 cubic feet. If the planter is 2 feet high and 3 feet in length, what is the width of the planter?

Explain how you found your answers:

5.G.4

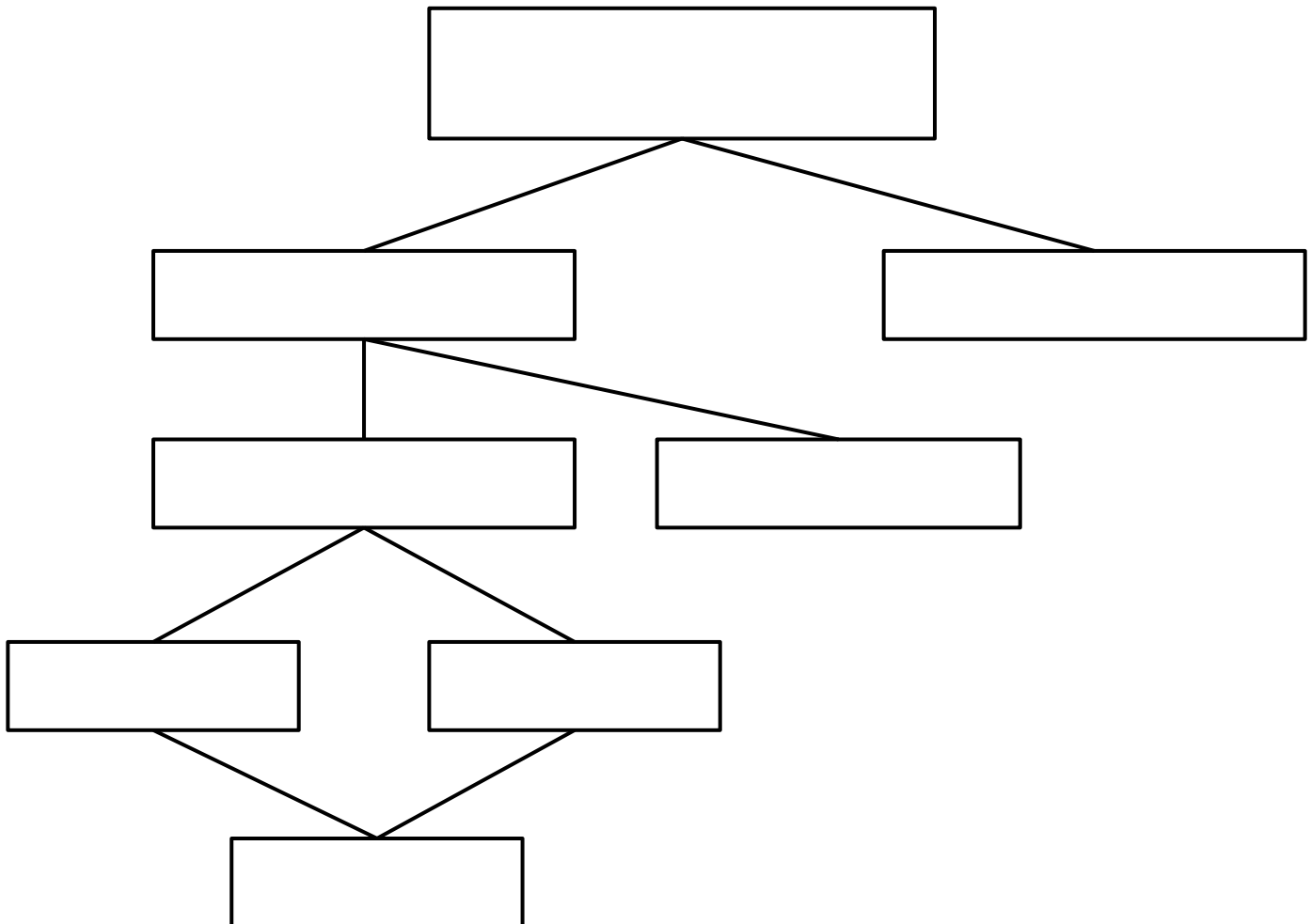
name: _____ Date: _____

Hierarchy of Two-Dimensional Figures

Use the terms in the word bank to complete the hierarchy of two-dimensional figures...

WORD BANK:

trapezoid parallelogram polygon square
quadrilateral rectangle rhombus triangle



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.



Word Ladder Answers



Fried Snacks, page 51

french, trench, wrench, wren, renew,
newer, fewer, fee, free, fry

Candlelight, page 52

candle, handle, hand, hard, shard, share,
hare, fare, flare, flame

Car Trouble, page 53

flat, inflate, late, slate, tales, tiles, tile,
time, tide, tire

Play Date, page 54

play, plan, plane, plates, staple, stable,
able, amble, ramble, rumble, humble,
hum, chum

Beautiful Day, page 55

blue, clue, glue, glee, flee, flea, flew, fly, sly,
sky

Ruling the Roost, page 56

rooster, roost, roast, toast, coast, cast, cat,
hat, hit, chick, chicken

New and Not-So-New, page 57

new, few, dew, sew, sow, now, how, show,
shown, own, owl, old

Midday Meal, page 58

lunch, launch, laundry, dry, day, say, sap,
sip, sipper, supper

Growing Up, page 59

short, shore, shoe, show, slow, plow, blow,
below, belong, long

Wedding Words, page 60

bride, stride, ride, rid, rod, rode, road,
roam, room, groom

Friendship, page 61

friend, end, send, sent, set, bet, but, cut,
cute, chute, chum

Rub-a-Dub-Dub, page 62

scrub, rub, rib, crib, cob, rob, throb, broth,
both, bath

Underwater, page 63

dive, dime, chime, chimp, champ, ham,
hum, hub, cub, Cuba, scuba

Hear This, page 64

scream, cream, cram, cramp, ramp, ram,
rat, rot, trot, trout, shout

Brainy Bird, page 65

eagle, beagle, bagel, bugle, bungle, bundle,
candle, handle, hand, Hank, hack, hawk

Itchy and Scratchy, page 66

itch, inch, pinch, punch, lunch, hunch,
hutch, hitch, pitch, patch, catch, scratch

Drinking Vessels, page 67

glass, lass, last, least, yeast, year, bear, beep,
jeep, jump, slump, pump, cup

Good Books, page 68

story, store, ore, chore, core, bore, bone,
boo, book

Land of the Free, page 69

liberty, tribe, bride, pride, ride, rid, red,
read, reed, freed, freedom

Corny!, page 70

maize, maze, made, jade, jab, job, cob,
con, coin, corn

School Days, page 71

school, cool, coal, cola, cold, scold, sold,
hold, hole, home

Jobs for Grownups, page 72

teacher, teach, each, ache, acre, care, pare,
parent



Ship Shape, page 73

navy, naval, novel, shovel, shove, shave, shape, share, shame, ham, him, hip, ship

Suppertime, page 74

supper, super, sugar, rag, drag, drug, dug, dig, din, diner, dinner

Just a Spoonful, page 75

sweet, sweat, seat, heat, hut, gut, tug, chug, hug, rug, shrug, sugar

Flower Power, page 76

petal, pedal, penal, panel, pane, pave, shave, shove, show, how, low, flow, flower

24 Hours, page 77

night, might, right, bright, big, jig, jag, jay, day

Horse Sense, page 78

colt, cost, host, most, mast, mart, mare, more, Morse, horse

Voting Booth, page 79

ballot, ball, ballet, let, lot, tot, tote, note, vote

Sailing, page 80

sail, snail, ail, aim, claim, clam, calm, palm, pal, pat, cat, coat, boat

Bunny Tales, page 81

rabbit, bit, bat, fat, far, car, scar, scare, care, hare

Good Hare Day, page 82

hare, share, sharp, harp, carp, card, bard, bare, bar, bat, but, bun, bunny

Very Fishy, page 83

minnow, window, wind, win, wine, whine, shine, shrine, shrimp

Beasts of Burden, page 84

horse, shore, chore, core, more, mere, mare, care, came, camel

Apple for Teacher, page 85

faculty, faulty, fault, felt, fell, tell, tall, tam, team, teach

Art Smart, page 86

art, part, park, pack, tack, talk, tall, mall, all, alley, galley, gallery

Uphill, page 87

mountain, mount, mound, found, hound, hind, hint, hunt, hull, hill

Globe Guessing, page 88

south, mouth, out, shout, pout, pot, port, pore, pole

Fish Wish, page 89

sturgeon, surgeon, surge, splurge, purge, purse, pure, cure, core, fire, fir, fit, fish

From the Ground Up, page 90

reconstruct, construct, instruct, destruct, distract, distrust, trust, brush, bush, bud, build, rebuild

Strength Training, page 91

weak, week, weed, reed, read, road, roach, coach, couch, touch, tough

Getting the Message, page 92

message, massage, mass, miss, mist, wrist, west, nest, net, not, note

Medal Winners, page 93

gold, golf, gulf, gull, pull, hull, heel, her, herb, verb, silver

Fading Light, page 94

light, right, sight, sigh, sign, sick, sack, pack, park, dark

Answers

page 8 1. rambled 2. scarce 3. thunderous
4. peculiar 5. dilapidated 6. abandon
7. reluctantly 8. bounding

page 9 1. B, 2. C, 3. B, 4. D, 5. A, 6. B, 7. D, 8. C

page 10 1. A, 2. C, 3. D, 4. B, 5. C, 6. A, 7. C, 8. B

page 11 1. B, 2. B, 3. C, 4. A, 5. D, 6. B, 7. A, 8. C

page 12 1. clear 2. irrigated 3. increased 4. contentment
5. excited 6. gorgeous 7. capture 8. located

page 13 1. B, 2. A, 3. D, 4. C, 5. A, 6. B, 7. A, 8. D

page 14 1. C, 2. B, 3. B, 4. D, 5. C, 6. D, 7. D, 8. C

page 15 1. A, 2. B, 3. D, 4. C, 5. C, 6. A, 7. B, 8. D

page 16 1. antonyms; C 2. synonyms; D 3. antonyms; B
4. synonyms; D 5. synonyms; B 6. antonyms; A
7. antonyms; B 8. synonyms; C

page 17 1. strait 2. pier 3. mast 4. cruise 5. trussed
6. stationary 7. borough 8. cash

page 18 1. B, 2. C, 3. A, 4. D, 5. C, 6. B, 7. D, 8. C

page 19 1. C, 2. A, 3. B, 4. B, 5. C, 6. C, 7. B, 8. D

page 20 1. A, 2. B, 3. D, 4. B, 5. C, 6. C, 7. A, 8. D

page 21 1. homophones D 2. antonyms; D 3. antonyms;
B 4. synonyms; D 5. synonyms; A 6. homo-
phones; D 7. homophones; B 8. synonyms; D

page 22 1. dictatorship; democracy 2. flannel; corduroy
3. computer; lathe 4. spinach; eggplant
5. century; decade 6. trapezoid; radius
7. fable; sonnet 8. landscape; portrait
9. latitude; isthmus

page 23 1. C, 2. A, 3. B, 4. D, 5. B, 6. D, 7. C, 8. A

page 24 1. C, 2. A, 3. B, 4. D, 5. B, 6. A, 7. D, 8. C

page 25 1. B, 2. A, 3. C, 4. D, 5. B, 6. A, 7. D, 8. B

page 26 1. homophones; C 2. synonyms; B
3. example and class; D 4. antonyms; C
5. antonyms; A 6. synonyms; A
7. example and class; D 8. synonyms; B

page 27 1. knife; scissors 2. shovel; spade
3. door; window 4. harp; saxophone
5. inline skates; wagon 6. oven; furnace
7. helicopter; jet 8. elevator; forklift
9. broom; mop

page 28 1. D, 2. A, 3. C, 4. A, 5. D, 6. B, 7. C, 8. B

page 29 1. A, 2. D, 3. C, 4. B, 5. C, 6. A, 7. B, 8. C

page 30 1. B, 2. D, 3. C, 4. B, 5. C, 6. D, 7. B, 8. A

page 31 1. object/function; D 2. antonyms; B
3. example and class; C 4. homophones; B
5. object/function; D 6. synonyms; A
7. object/function; B 8. example and class; D

page 32 1. drills; fills 2. paints; sketches 3. hammers;
builds 4. mends; sews 5. cooks; bakes 6. trains;
competes 7. rescues; observes 8. entertains;
amuses 9. combs; shampoos

page 33 1. B, 2. D, 3. A, 4. B, 5. D, 6. C, 7. A, 8. B

page 34 1. D, 2. C, 3. B, 4. D, 5. C, 6. B, 7. A, 8. C

page 35 1. C, 2. A, 3. B, 4. D, 5. C, 6. A, 7. B, 8. D

page 36 1. synonyms; D 2. doer/action; B
3. doer/action; C 4. antonyms; A
5. example and class; C 6. homophones; D
7. object/function; D 8. synonyms; A

page 37 1. cow; pig 2. patient; nurse 3. vendor; bleacher
4. dancer; director 5. student; principal
6. mailbox; pedestrian 7. pilot; passenger
8. goldfish; seaweed 9. flour; baker

page 38 1. D, 2. B, 3. B, 4. B, 5. D, 6. A, 7. C, 8. C

page 39 1. B, 2. A, 3. C, 4. D, 5. B, 6. D, 7. D, 8. B

page 40 1. C, 2. B, 3. D, 4. A, 5. C, 6. A, 7. A, 8. D

page 41 1. doer/action; C 2. location; A
3. example and class; D 4. synonyms; B
5. antonyms; A 6. homophones; D
7. object/function; C 8. synonyms; A

page 42 1. B 2. C 3. D 4. D 5. B 6. A 7. C 8. C 9. B 10. D

page 43 1. C 2. B 3. A 4. D 5. C 6. D 7. A 8. D 9. A 10. B

page 44 1. C 2. B 3. D 4. C 5. B 6. A 7. B 8. D 9. C 10. B

page 45 1. B 2. A 3. C 4. D 5. C 6. D 7. B 8. D 9. C 10. B

page 46 1. D 2. A 3. B 4. D 5. B 6. A 7. C 8. B 9. D 10. C

page 47 1. C 2. D 3. D 4. C 5. C 6. A 7. D 8. A 9. D 10. B

Homophones

Example
and
Class

Object/
Function



Glossary

for Patch-Word Quilt of Preposition Idioms

The following is an alphabetical list of all the idioms mentioned in this book. Many of the meanings come from the *Scholastic Dictionary of Idioms* by Marvin Terban (Scholastic, 1996), which features over six hundred idioms, their meanings, and their origins.

A

- Add fuel to the fire** to make a bad situation worse; to do or say something that causes more trouble, makes someone angrier
- Air your dirty laundry in public** to talk about your private disagreements or embarrassing matters in public, usually while quarreling
- Albatross around your neck** a very difficult burden that you can't get rid of or a reminder of something you did that was wrong
- All ears** eager to listen; sharply attentive; curious
- All thumbs** awkward and clumsy, especially with the hands
- Ants in your pants** extreme restlessness; overactivity
- Apple of your eye** a person or thing that is greatly loved, treasured, and adored
- As the crow flies** by the shortest and most direct route; measured in a straight, direct line between two places
- Asleep at the switch** not attending to one's job or failing to react quickly; not being alert
- At the end of your rope** at the limit of your ability, endurance, or patience to do something

B

- Babe in the woods** a person who is inexperienced; a naive, trusting person
- Back to square one** return to the beginning because of a failure to accomplish the desired result
- Backseat driver** a bossy person who tells another person what to do; a person who gives unwanted advice and directions

- Bark is worse than your bite** the way a person sounds is much more frightening than the way she or he acts; the threat is often worse than the action taken
- Barking up the wrong tree** to direct your attention or efforts toward the wrong person or thing; to have the wrong idea about something
- Bats in your belfry** a person who has crazy ideas or acts irrationally
- Beat a dead horse** to pursue a useless goal; to continue fighting a battle which has been lost; to keep arguing a point which has already been decided
- Beauty is in the eye of the beholder** there is no standard for beauty, so what one person likes or sees in someone or something is not necessarily what others see; different people have different opinions
- Bee in your bonnet** a crazy idea; an obsession with an idea
- Beggars can't be choosers** needy people have to take whatever they can get and cannot be concerned about the quality if they cannot afford to buy it for themselves
- Behind the eight ball** in trouble or out of luck; in a difficult position or in a bad situation with little hope of winning
- Below par** unsatisfactory; below expectations
- Better half** either partner in marriage
- Between a rock and a hard place** being in a very tight spot and faced with a difficult decision
- Bird in the hand is worth two in the bush** what you already have is better than what you might or might not get in the future; a guarantee is worth more than a promise



Birds of a feather flock together people who have things in common, such as interests and ideas, usually hang out together; people who are alike often become friends

Bite off more than you can chew to take on a task that is more than you can accomplish; to be greedy, overconfident, or too ambitious by taking on more jobs or responsibilities than you can deal with at one time

Bite the bullet prepare for an unpleasant experience; brace yourself to endure with courage something painful but necessary

Bite the dust to die; to fall in defeat; to fail to succeed

Bite the hand that feeds you to turn against someone who helps you; to do harm to someone who does good things for you

Black sheep of the family the most unsuccessful, least admirable member of a family or similar group; a disgraced person

Bleeding heart an extremely softhearted person who feels compassion or pity towards all people, including those who may not deserve sympathy

Blood is thicker than water one can expect more kindness from a family member than from a stranger; a person will do more for a relative than for anyone else

Blow your stack see *Hit the roof*

Blue blood of high or noble birth; an aristocrat; from the upper class of society

Bolt from the blue something sudden, unexpected, and shocking

Born with a silver spoon in your mouth born to wealth, comfort, and privilege

Bowl of cherries a wonderful, pleasant situation or position; an easy, comfortable life

Bring down the house to get an audience to clap enthusiastically or laugh loudly

Bug off to leave someone alone; go away; stop annoying someone

Bull in a china shop a clumsy person who deals too roughly with a delicate situation; a rough person who is near breakable things; a tactless person who says or does something that angers people or upsets their plans

Burn the candle at both ends to overwork yourself mentally or physically and until you're exhausted

Burn the midnight oil to stay up very late at night studying or working

Burn your bridges behind you to make a decision you cannot change; to commit oneself to a course of action

Burn yourself out to exhaust yourself by overworking physically or mentally

Bury your head in the sand to ignore danger by pretending you don't see it; to hide from obvious signs of danger

Busy as a beaver working very hard; extremely industrious

Busy as a bee see *Busy as a beaver*

Butter someone up to flatter someone; to try to get a favor by praising someone

Butterflies in the stomach a fluttery feeling in the stomach, usually caused by nervousness

Button your lip to stop talking; be quiet

Buy a pig in a poke to buy something without seeing or examining it

By the skin of your teeth by an extremely narrow margin; with practically no room to spare; just barely

C

Call it a day to stop work for the day; to bring a project to an end for the time being

Call the shots to make the decisions; to be in charge; to give orders

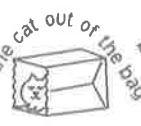
Can't see the forest for the trees to overlook the overall situation because of a focus on small details; to be so involved in details that you miss the whole picture

Cast the first stone to be the first to attack, blame, or criticize someone; to lead accusers against a wrongdoer

Cat got your tongue? Is there a reason that you're not speaking?

Catch someone red-handed to catch someone in the act of doing something wrong

Chew the fat to have a friendly, informal talk; to chat in a relaxed way



Chew up the scenery to overact; to exaggerate your emotions

Chicken feed a very small or insignificant amount of money

Chickens come home to roost words or actions come back to haunt a person; evil acts will return to plague the doer

Chip off the old block a child who resembles a parent in behavior, looks, or abilities

Clean as a hound's tooth completely free from dirt; perfectly neat (also *Clean as a whistle*)

Climb the walls to be frustrated or anxious during a challenging situation; to be unable to endure

Cold turkey the sudden stopping of any habit

Come up smelling like a rose to get out of a possibly embarrassing or disgraceful situation without hurting your reputation, and maybe even improving it

Cook your goose to put an end to; to ruin someone's plans

Cool as a cucumber very calm; not nervous or emotional

Cost an arm and a leg very expensive; high-priced, though possibly not worth the cost

Crocodile tears fake tears; false grief

Cross that bridge when you come to it don't predict problems until they actually happen; don't worry about future events now; don't deal with a difficulty until you have to

Cut off your nose to spite your face to injure yourself out of anger toward another; to make a situation worse for yourself when angry with someone

D

Dark-horse candidate a contestant about whom little is known and who wins unexpectedly

Dead as a dodo totally dead or hopeless; without a chance of success (also *Dead as a doornail*)

Dead duck a person who is ruined; a person or project unlikely to continue or survive

Dog days of summer the hottest and most humid days of summer, usually much of July and August

Dog-eat-dog world a way of life marked by fierce competition in which people compete ruthlessly for survival or success

Dog's life a bleak, harsh, terrible existence without much happiness or freedom

Don't count your chickens before they hatch don't count on profits before you earn them or have them in hand

Don't look a gift horse in the mouth don't complain if a gift is not perfect; take what you've been given without criticism or emphasis on its worth

Down in the mouth sad and depressed (also *Down in the dumps*)

Down the drain lost forever; wasted

Down the hatch swallow a drink in one gulp

Down-to-the-wire running out of time; at the very last minute

Dressed to the nines wearing fashionable clothing; dressed to attract attention

Drive you up the wall to make someone angry or confused; to make somebody very annoyed or frustrated

Drop you like a hot potato to get rid of something or somebody as quickly as possible

E

Eager beaver see *Busy as a beaver*

Early bird catches the worm a person who gets up early and starts a project ahead of others has the best chance of accomplishing his or her goal

Eat crow to be forced to do something very disagreeable; to acknowledge a mistake or defeat

Eat your heart out to feel extremely unhappy about a hopeless situation; to make yourself sick with grief and worry

Eat your words to have to take back what you said; to admit humbly that you were wrong

Elbow grease hard, energetic manual labor

Eleventh hour at the latest possible time, just before the absolute deadline

Every cloud has a silver lining there is something good in every bad situation



Everything but the kitchen sink practically everything there is; every possible object whether needed or not

Eye for an eye and a tooth for a tooth revenge or punishment exactly like the original crime or offense

Eyes in the back of your head ability to sense what is happening outside one's field of vision; ability to know what happens when one's back is turned

F

Face the music to endure the consequences of one's actions; to take what you have coming to you

Fat cat a wealthy person; a rich benefactor

Feel your oats to be in high spirits, energetic; to act in a proud way

Field day to have unlimited opportunities; to have it all your own way; to go all out and experience success at something

Fifth wheel an unneeded, extra person

Fish or cut bait do one thing or another, but stop delaying; make a choice; act now or give someone else a turn

Fish out of water a person who is out of his or her usual place; someone who doesn't fit in or is helpless in a situation

Fly by the seat of your pants to do something by instinct and feel without any earlier experience or instruction

Fly in the ointment a small annoyance that spoils an otherwise pleasant situation

Foam at the mouth to be uncontrollably furious, like a mad dog

Follow your nose to go straight ahead in the same direction

For the birds worthless; useless; stupid

Forty winks a short nap

Four corners of the Earth from all over the planet; all parts of a place

From soup to nuts the whole thing from beginning to end

Full of beans lively, happy and energetic, high-spirited

Full of hot air being foolish and talking nonsense; pompous; vain

G

Get a kick out of something to enjoy doing something; to get a thrill out of something

Get the pink slip to be fired

Get under your skin to bother or upset someone

Get your goat to annoy very badly; to make a person angry

Get your walking papers to be fired

Give me five to slap a person's hand as a hearty greeting or a sign of solid agreement

Give your eyeteeth for something to want something very badly; to be willing to give up something valuable to get something else

Go against the grain to oppose natural tendencies; to oppose a person's wishes or feelings; to cause anger

Go along for the ride to watch but not take part in an activity; to keep someone company

Go bananas to be or go crazy

Go climb a tree go away; leave; stop bothering me

Go fly a kite see *Go climb a tree*

Go fry an egg see *Go climb a tree*

Go jump in a lake see *Go climb a tree*

Go over like a lead balloon to fail miserably

Go over with a fine-tooth comb to search with great care or attention

Go to the dogs to decline in looks or health; to be ruined or destroyed; to ruin oneself

Go yellow to act cowardly

Gone to pot become ruined; to get worse and worse

Goody-two-shoes a person who thinks he or she is perfect and tries to be

Green thumb having a special talent for making flowers and green plants grow well

Green with envy extremely jealous



H

- Hand-to-mouth existence** to spend your salary as fast as it's earned without saving any for the future
- Hard nut to crack** a problem that's very difficult to understand or solve; a difficult person
- Have other fish to fry** to have other things to do; to not bother with one thing because you have more important things to accomplish
- Have your cake and eat it too** to spend or use something up but still have it; to have two things when you must choose one
- Have your heart in your mouth** to be extremely frightened about something
- Head and shoulders above someone** far superior; much better than
- Head in the clouds** absent-minded; daydreaming; lost in thought
- Heart's in the right place** to be well-meaning and kindhearted; to have good intentions even though mistakes occur
- High horse** acting superior and arrogant as if you were better than other people
- Hit below the belt** to use unfair tactics or be unsportsmanlike
- Hit the books** study school assignments carefully; prepare for classes by reading and doing homework
- Hit the road** to begin a journey, to leave
- Hit the roof** to lose your temper suddenly; to become violently angry
- Hit the spot** to fully satisfy and refresh, especially with food or drink
- Hold your horses** slow down; wait a minute; be patient
- Hold your tongue** struggle not to say something you want to say
- Horse of a different color** a different matter altogether; something from a different nature from that being noticed
- Hot under the collar** very angry; upset

I

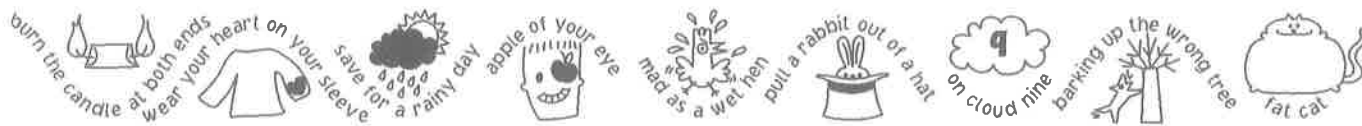
- If at first you don't succeed, try, try again** don't give up; if you make a mistake you should keep working at it until you are successful
- If the shoe fits, wear it** If a remark applies to you, you should admit that it is true.
- In a pickle** see *Behind the eight ball*
- In hot water** in serious trouble or in an embarrassing situation with someone of authority
- In the doghouse** in disgrace or dislike; facing punishment
- In the driver's seat** in control; in the position of authority
- In the pink** in excellent health physically and emotionally
- It takes two to tango** two people are required to accomplish this deed

J

- Jump down your throat** to talk or scream at someone in a sudden, angry way
- Jump on the bandwagon** to become part of the newest activity because many other people are

K

- Keep something under your hat** to keep something secret
- Keep your ear to the ground** to pay attention and be well-informed
- Keep your fingers crossed** to wish for good luck and success for someone or something
- Keep your head above water** to earn enough to stay out of debt and avoid financial ruin; to do just enough to keep up with all of one's responsibilities
- Keep your nose to the grindstone** to force oneself to work hard all the time; to always keep busy
- Kill the goose that lays the golden eggs** to spoil or destroy something good out of stupidity, greed, or impatience
- Kill two birds with one stone** to do two things by one action; to get two results with just one effort
- Knee-high to a grasshopper** very young and, therefore, very short



L

Laugh out of the other side of your mouth to be made to feel sorrow, annoyance, or disappointment after you felt happy; to cry at a change in luck after experiencing some happiness

Lay an egg to give an embarrassing performance

Leave no stone unturned to make all possible efforts to carry out a task or search for someone or something

Lend an ear to listen and pay attention to

Let sleeping dogs lie to not make trouble if you don't have to; to not make someone angry by stirring up trouble

Let the cat out of the bag to give away a secret

Like two peas in a pod identical; alike in looks and behavior

Little pitchers have big ears little children, listening to the conversations of older people, often hear and understand a lot more than people give them credit for

Live high off the hog to live in a rich style and own lots of expensive things

Lock the barn door after the horse is out to take careful precautions to do the right thing after it is too late

Long in the tooth old; aged

Look down your nose at someone to think of and treat people as if they were lower in quality or ability

Look what the cat dragged in a person who looks disheveled; the arrival of an unwanted person

M

Mad as a wet hen very upset; extremely angry; ready to fight

Make a mountain out of a molehill to turn a small, unimportant issue into a big, important one; to exaggerate the importance of something

Make a silk purse out of a sow's ear to create something valuable or beautiful out of something practically worthless or ugly

Make hay while the sun shines to make the best of a limited opportunity

Make it by a nose to succeed at the very last moment

Make waves to cause trouble; to upset matters; to create a disturbance

Make your mouth water to look so attractive and desirable that it makes you want to have it very much; to want to eat or drink something that looks or smells delicious

Monkey business silliness or fooling around; dishonest or illegal activities; idiotic pranks

More than meets the eye there are hidden facts that can't be seen or understood right away

More than one way to skin a cat there are several different ways of reaching the same goal

N

Name is mud the person is in trouble, possibly doomed and worthless

Need something like a hole in the head to have no need for something at all

Need something like a third leg see *Need something like a hole in the head*

Needle in a haystack something hard or impossible to find; anything hopeless (in a search)

No skin off your nose of totally no concern to you whatsoever; it doesn't matter to you one way or the other

No spring chicken not young anymore

O

Off the beaten track (path) not well-known or used; an unfamiliar location; unusual; different

Off the top of your head stating something quickly and without thinking hard about it

Off-the-wall shocking; very unusual

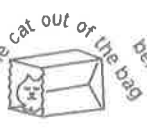
Off your rocker crazy; silly, foolish; not thinking correctly

Old wives' tale a superstition; a belief or practice not based on fact

On cloud nine blissfully happy; joyous

On pins and needles waiting anxiously for something; extremely nervous; in great suspense

On the ball alert; effective; skillful; knowledgeable



- On top of the world** feeling extremely happy
- Once bitten, twice shy** when something bad happens to you, you will think twice before putting yourself in the same situation
- Once in a blue moon** almost never; very seldom; hardly ever
- One good turn deserves another** one good deed should be paid back with another
- One-horse town** a place with few comforts and activities; a dull rural town
- One-track mind** always thinking about only one subject
- Open a can of worms** to cause trouble; to set unpleasant events in motion
- Out in left field** unusual; crazy; totally wrong
- Out of sight, out of mind** if you don't see something for a long time, you'll eventually stop thinking about it
- Out of the clear blue sky** suddenly and without any warning; totally unexpectedly
- Out of the frying pan and into the fire** from a bad situation into one that is worse
- Out of the mouths of babes** children can unexpectedly say very intelligent things
- Out of the woods** safe from trouble or danger
- Out on a limb** taking a chance; in a dangerous position from which it is hard to withdraw or change
- Over a barrel** helpless; in someone's power; at a disadvantage
- Over the hill** past one's prime; unable to function as one used to; too old
- Over your head** a risky situation that will lead to certain failure; beyond your ability to understand something

P

- Pay through the nose** to pay too much for something
- People who live in glass houses shouldn't throw stones** you should not criticize others if you are just as bad as they are
- Picture is worth a thousand words** to actually see or experience something is much better than to merely have it described to you

- Pie in the sky** something not possible; an unrealistic hope
- Play both ends against the middle** to pit two opponents against each other in such a way as to benefit yourself; to use each of two sides for your own purpose
- Play cat and mouse** to fool or tease someone by pretending to let her or him go free and then catching her or him again
- Play second fiddle** to be a follower; to be in an inferior position
- Play with fire** to take an unnecessary and dangerous risk; to court danger
- Poor as a church mouse** very poor; poverty-stricken
- Pot calling the kettle black** the person criticizing another person's faults is guilty of the same faults himself or herself
- Power behind the throne** the actual, but unrecognized, person in charge
- Pull a rabbit out of a hat** to produce something that is needed as if by magic; to unexpectedly find a solution to a problem
- Pull the wool over your eyes** to fool, deceive, or trick someone
- Pull your leg** to tease or fool someone; to jokingly try to lie to somebody
- Pull yourself together** to regain control over one's emotions and become calm after being very upset
- Put all your ducks in a row** to organize or finish things before moving on to something else
- Put the cart before the horse** to do things in the wrong order
- Put your money where your mouth is** to be willing to bet on or invest your money in something you support or believe in

Q

- Quick on the draw** ready, alert, and quick to respond or react; mentally fast; quick to grasp information; touchy, sensitive
- Quiet as a mouse** silent or still; making very little noise; saying nothing; hushed, subdued



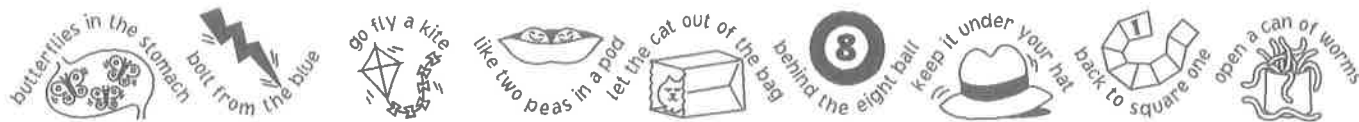
R

- Raining cats and dogs** to rain very heavily; to pour
- Raise the roof** to be very angry, complain loudly, and make trouble
- Rat race** a fierce, unending, stressful competition in business or society
- Rats abandoning a sinking ship** disloyal people who desert a failing enterprise before it's too late
- Read between the lines** to discern the true, hidden meaning or fact in any document or action
- Red-carpet treatment** great respect and hospitality given to someone important; special treatment
- Red herring** something deliberately misleading to divert your attention from the main subject; something irrelevant that confuses an issue
- Red-letter day** a day remembered as especially happy and significant
- Red tape** excessive formality and time-consuming, rigid adherence to rules and regulations
- Right off the bat** immediately, spontaneously, and without delay
- Rock the boat** to make trouble and disrupt a stable situation; to risk spoiling a plan; to create a disturbance
- Rome was not built in a day** a difficult or important goal or task cannot be achieved quickly or all at once
- Rotten apple spoils the barrel** one bad person or thing may spoil an entire group
- Rub the wrong way** to annoy and irritate someone; to handle someone insensitively
- Run circles around someone** to easily do something far better than someone else
- Run off at the mouth** to talk too much; to talk nonstop

S

- Save for a rainy day** to save for a time of need; to put something away for the future
- Saved by the bell** rescued at the last possible moment from an embarrassing or dangerous situation

- Scarce as hen's teeth** very, very rare or totally nonexistent
- See eye to eye** to agree fully; to have the same opinion
- See a pink elephant** to get so drunk you see things that don't exist
- Sell like hotcakes** to sell quickly, effortlessly, and in quantity
- Seventh heaven** being in an emotional state of extreme happiness
- Shake a leg** to hurry up; to go faster; to speed up
- Shoot the breeze** see *Chew the fat*
- Sick as a dog** very sick; suffering miserably without an ailment
- Sight for sore eyes** a most welcome, unexpected sight; a pleasant surprise
- Sink or swim** to fail or succeed by one's own efforts without anyone's help or interference
- Sitting duck** someone or something likely to be attacked and unable to put up a defense
- Six of one and a half dozen of the other** one and the same; nothing to choose between; equal
- Skate on thin ice** to take a big chance; to risk danger; to start out on a hazardous course of action
- Skeleton in your closet** a shameful and shocking secret that people try to keep hidden
- Smell a rat** to be suspicious; to feel that something is wrong
- Smell something fishy** see *Smell a rat*
- Snug as a bug in a rug** cozy and comfortable; safe and secure
- Spare the rod and spoil the child** to physically punish children when they misbehave so they'll learn to behave properly in the future
- Spill the beans** to give away a secret to someone who is not supposed to know it
- Spitting image** a perfect resemblance; an exact likeness
- Still waters run deep** somebody can be more knowledgeable or emotional than he or she first appears to be; a silent person may be intelligent
- Stir up a hornet's nest** to make many people furious; to cause trouble



Straight from the horse's mouth directly from the person or place that is the most reliable source or the best authority

Straighten up and fly right to stop behaving foolishly and start acting serious

Strike a happy medium to find a compromise to a problem; to find a sensible solution midway between two opposite desires

Strike while the iron is hot to act at the most favorable time or moment to get the best results; to take advantage of favorable conditions

Swallow hook, line, and sinker to believe a story completely without questioning it; to be very gullible

Swan song the final, farewell performance of an actor or singer; one's last words or actions

Sweep you off your feet to make a favorable impression; to affect with strong emotion or enthusiasm; to overcome someone with feelings of love or happiness so strong that he or she can't resist you

T

Take a backseat to be in an inferior position; to take second place to another person who is in control

Take someone under your wing to help, guide, or protect someone

Take the bull by the horns to act bravely in a troublesome situation; to face up to a difficult challenge by taking decisive action

That's the way the ball bounces that's the way life is; that's fate; things sometimes turn out a certain way and you can't do anything about it

That's the way the cookie crumbles see *That's the way the ball bounces*

Throw a monkey wrench into the works to interfere with a smoothly running operation; to upset something in progress

Throw the baby out with the bathwater to lose or throw out something valuable or useful when getting rid of something that is useless

Throw the book at someone to punish severely for breaking rules or the law; to give the maximum penalty

Tickled pink to be very amused or pleased; to be delighted, entertained, or extremely happy

Till the cows come home for a long, long time

Too many cooks spoil the broth a project is set back rather than helped by too many organizers; the more people who work on one project, the worse it will turn out

Top banana the leading comedian in a variety show; a boss

Touch and go very risky, uncertain, or critical

Touch something with a ten-foot pole to avoid at all costs; to stay far away from a difficult problem

True-blue very loyal, dependable, and faithful

Turn up your nose at someone to regard something with haughtiness; to be snobby; to show that someone or something is not good enough for you

Two-faced false; dishonest

Two's company, three's a crowd when you would like to do something with just one other person, a third participant would be unwelcome

U

Up a creek without a paddle in deep trouble and unable to do anything about it; in serious trouble

Up against the wall in big trouble; in a difficult or desperate situation

Upset the applecart to spoil or interfere with a plan; to obstruct progress; to mess everything up by surprise or accident

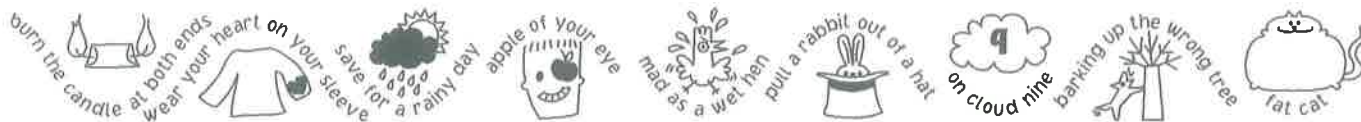
W

Walk on eggs to be very cautious; to proceed warily

Walking on air to be exuberantly happy, excited, and joyful

Watched pot never boils when waiting anxiously or impatiently for something to happen, it seems to take much longer

Water under the bridge something that happened in the past; it's too late to worry about something that already happened



Wear your heart on your sleeve to show one's emotions and feelings openly

Wet behind the ears young, inexperienced, and immature

What's good for the goose is good for the gander a rule or method of treatment that applies to one person or group must also apply to others, especially your mate

When the cat's away, the mice will play when the person in charge is absent, people will usually do as they please and take advantage of the freedom

Where there's smoke, there's fire there is always a basis for a rumor, no matter how untrue it appears; suspicious things usually mean that something is wrong

White elephant any possession that is useless, unwanted, or costs a lot of money to keep

Wild-goose chase a useless or hopeless search, especially because something does not exist or can't be found

Wolf in sheep's clothing somebody who appears to be harmless but is really dangerous

Word of mouth by one person telling another; by speaking, rather than writing

Y

You can lead a horse to water but you can't make him drink you can encourage, but not force, someone to do something

You can't teach an old dog new tricks people who find it difficult or impossible to change their ways or adjust to new ideas

Z

Zipper your mouth see *Button your lip*

Like Two Peas In a Pod

Page 51

1. Bite the bullet
2. Wild-goose chase
3. Everything but the kitchen sink
4. Up the creek without a paddle
5. Go over with a fine-tooth comb
6. Don't open a can of worms
7. On cloud nine
8. Butterflies in the stomach
9. If at first you don't succeed, try, try again
10. Let the cat out of the bag
11. Chip off the old block
12. Make hay while the sun shines

Answers

Page 52

1. Hit the roof
2. In the driver's seat
3. Shoot the breeze
4. Don't count your chickens before they've hatched
5. Go fly a kite
6. Rock the boat
7. Bats in your belfry
8. Cost an arm and a leg
9. Take a backseat
10. Go against the grain
11. That's the way the ball bounces
12. Out of the clear blue sky

Scrambled Idioms

Page 53

1. fry an egg
2. skin a cat
3. hatch
4. spoil the broth
5. run deep
6. eat it too
7. make him drink
8. fly right
9. come to it
10. swim
11. throw stones
12. spoil the child
13. come home
14. spite your face
15. be choosers

Page 54

1. 6
2. 9
3. 1
4. 8
5. 40
6. 1
7. 2
8. ½
9. 2
10. 4
11. 5
12. 9
13. 1
14. 10
15. 2
16. 11
17. 5
18. 1,000
19. 2
20. 1

21. 0.25
22. 0.9
23. 0.178
24. 0.48
25. 0.067

Arithmetic Logic

1. $4 + 3 - 2 + 1 = 6$
2. $(9 \times 2) \div 6 + 1 = 4$ or
 $(9 + 2) - 6 - 1 = 4$
3. $(7 + 9) \div 4 - 3 = 1$
4. $[(8 \div 4) \times 3] - 4 = 2$
5. $(1 \times 2) + 4 + 3 = 9$
6. $[(3 + 8) - 7] \times 2 = 8$
7. $12 \times 3 \div 9 + 8 = 12$
8. $[(15 \div 3) - 4] \times 7 = 7$ or
 $[(15 + 3) - 4] - 7 = 7$
9. $1 + 4 + 6 - 8 = 3$
10. $2 \times 2 \times 2 - 2 = 6$
11. $(40 + 10) \times 2 - 30 = 70$
12. $20 - 10 + 60 + 20 = 90$
13. $90 \div 2 \div 5 + 1 = 10$
14. $60 \div 4 + 5 - 5 = 15$
15. $6 \times 5 \times 2 - 10 = 50$
16. $12 + 8 + 20 - 5 = 35$
17. $55 \times 2 - 10 + 20 = 120$
18. $75 - 25 + 15 - 10 = 55$
19. $80 \div 8 \times 2 \times 2 = 40$
20. $10 \times 10 \div 20 + 15 = 20$
21. $(136 - 20) \times 2 - 100 = 132$
22. $51 \div 3 + 12 - 1 = 28$
23. $164 \div 4 \times 2 + 27 = 109$
24. $88 \times 2 \div 4 - 10 = 34$
25. $100 \div 5 + 35 - 7 = 48$
26. $(0.75 - 0.30) \times 2 + 0.10 = 1.00$
27. $\frac{1}{2} - \frac{1}{6} + \frac{1}{5} = \frac{8}{15}$
28. $2 \times \frac{9}{10} - 1\frac{1}{3} = \frac{7}{15}$
29. $4 \times 0.25 + 0.10 - \frac{1}{2} = 0.6$
30. $[(\frac{2}{3} + \frac{1}{2}) - \frac{1}{4}] \times 2 = 1\frac{5}{6}$

Logic with a Matrix

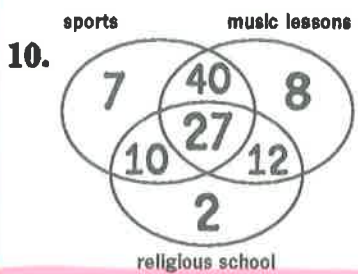
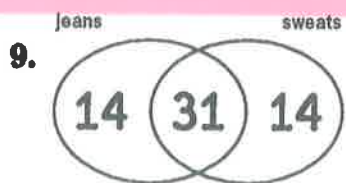
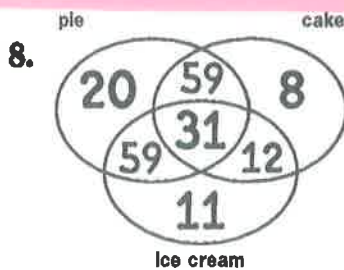
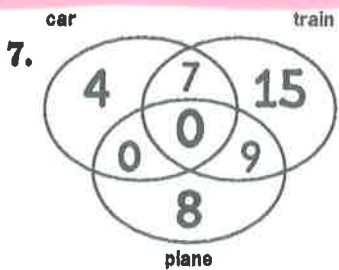
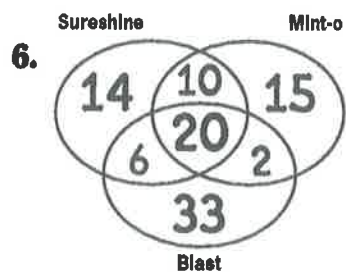
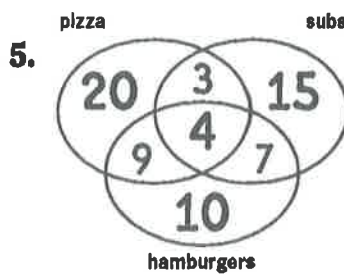
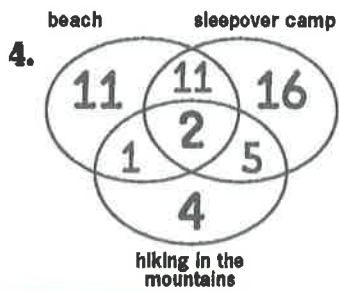
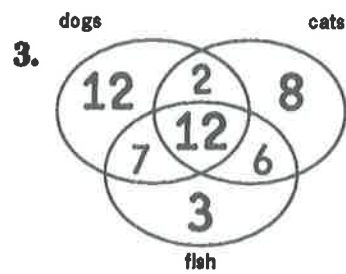
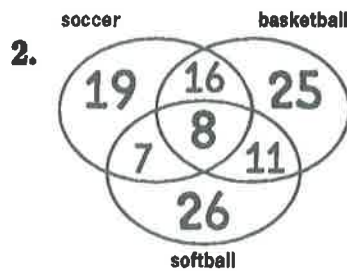
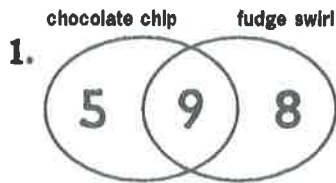
1. Jessie: skim milk; Sandy: orange juice; Jamie: spring water
2. MaryBeth: python; Elizabeth: parrot; Beth: chameleon
3. Melissa: problem about Warren; John: problem about Matilda; Chau: problem about Evelyn
4. Doug: Ms. Carr; Matt: Mr. London; Jonah: Dr. Saunders; Jenny: Ms. Parsons
5. Grade 1: swimming pool; Grade 2: pond; Grade 3: ocean; Grade 4: lake
6. Peter: drama; Janice: science fiction; Andrew: comedy; Samuel: westerns
7. Marie: 12 km; Brian: 7 km; Sally: 10 km; Freddy: 11 km; Patricia: 5 km
8. Gordon: 4 hours, 40 minutes; Nikki: 3 hours, 45 minutes; Candi: 6 hours, 15 minutes; Stefanie: 5 hours, 20 minutes
9. Chau: Mountain Climb; Melinda: Tilt-a-Whirl; Hannah: Swamp Coaster; Petra: Ferris Wheel; Benita: Wild Grizzly
10. Camille: accountant; Josie: attorney; Beth: salon; Mike: teacher
11. Serena: *Charlie and the Chocolate Factory*; Matthew: *Tales of a Fourth Grade Nothing*; Jacob: *A Wrinkle in Time*; Dexter: *Stuart Little*
12. Felicity: December 26; Monroe: January 2; Belinda: July 5; Wyatt: February 15; Brook: March 18
13. Brian: $4782 + 999$; Henry: $1644 + 777$; Ernest: $827 + 699$; Christopher: $508 + 948$; Peter: $479 + 1356$.
14. Julie: 6 times; Kim: 9 times; J. M.: 11 times; Robbie: 2 times; Matthew: 7 times; David: 5 times
15. Mikhael: 523-8199; Sondrah: 356-1178; Charleen: 631-2140; Yolanda: 817-3624
16. Kevin: Sport, can stand on only two legs with the other two in the air; Earl: Bozo,

can jump over a barrel; Marvin: Harry, can jump through a hoop

17. Wanda: blue, Georgetown University; Rita: green, Brown University; Barb: red, Washington University; Greta: white, Rhode Island State University

18. First week: Baltimore; second week: Atlanta; third week: Charlotte; fourth week: Washington; fifth week: Omaha; sixth week: Kansas City; seventh week: Seattle; eighth week: Denver

Logic Using a Venn Diagram



Answers

PAGE 47: **Dino Bone Zone**

Percentage of skeleton that is complete

- 249/480 bones = 52% complete 6
- 10/18 bones = 55% complete 5
- 185/445 bones = 42% complete 7
- 56/455 bones = 12% complete 8
- 356/377 bones = 94% complete 1
- 297/351 = 85% complete 3
- 176/271 = 65% complete 4

PAGE 48: **Milk Money**

- Jacob—14 days ($\$10.95 \div .80$)
- Louis—50 days ($\$17.50 \div .35$)
- Molly—50 days ($\$20.00 \div .40$)
- Ralph—106 days ($\$26.47 \div .25$)
- Rosita—120 days ($\$59.99 \div .50$)
- Tyrone—21 days ($\$15.75 \div .75$)
- Karen—217 days ($\$65.00 \div .30$)

PAGE 49: **Money Matters**

- chocolate (\$10.80) more than gum (\$10.29)
- apples (\$7.50) more than bananas (\$7.00)
- pasta (\$13.08) more than soup (\$8.90)
- lettuce (\$26.00) more than cucumbers (\$20.70)
- batteries (\$59.85) more than bulbs (\$48.07)
- running shoes (\$126.00) is more than shirts (\$110.25)
- party dresses (\$195.00) is more than ties (\$189.00)

PAGE 50: **Find Your Way Out**

One kilometer is 1,000 meters, which is a little less than a mile (.62 of a mile, to be exact.) The total number of meters walked must be divided by 50, because the explorers will drop one item every 50 meters.

- Jesse—yes; 3 km = 3,000 meters
 $3,000 \div 50 = 60$ items needed
- Warner—no; 2 km = 2,000 meters
 $2,000 \div 50 = 40$ items needed
- Mara—yes; 2.5 km = 2,500 meters
 $2,500 \div 50 = 50$ items needed
- Brianne—yes; 1,000 meters
 $1,000 \div 50 = 20$ items needed
- Sylvia—no; 4 km = 4,000 meters
 $4,000 \div 50 = 80$ items needed
- Tomas—no; 7 km = 7,000 meters
 $7,000 \div 50 = 140$ items needed
- Alex—yes; 1.25 km = 1,250 meters
 $1,250 \div 50 = 25$ items needed
- Jud—no; 2.75 = 2,750 meters
 $2,750 \div 50 = 55$ items needed
- Nathan—no; 1.5 km = 1,500 $\div 50 = 30$ items needed
- Livia—no; 3.5 km = 3,500 $\div 50 = 70$ items needed

PAGE 51: **Guess Your Best**

- 5678 5. 79762
- 96714 6. 47757
- 37162

PAGE 52: **Mark and Darcy's Game**

- 15, 18
- 15, 17, 18 or 20, 15, 15
- 25 twice; or 20, 30; or 15, 35
- no, the highest he could get in 3 tosses with no bull's eye is 120
- yes, because no two numbers on this board could add up to 95
- 17, 27, 37 or 33, 33, 15

PAGE 53: **On the Wall**

- five years from 2000–2005
- 2001: Sandra; 2002: Sandra; 2004: Noah
- 2000: Sandra; 2003: Alison; 2005: Nick
- Sandra
- ten inches
- Nick
- eight inches
- Sandra grew seven inches from 2000 to 2001.
- Nick and Alison. Nick didn't grow from 2000 to 2001 or from 2004 to 2005. Alison didn't grow from 2002 to 2003.
- Sandra because she grew the most, 16 inches, in five years.

PAGE 54: **Speed Readers**

- 16 chapters over 7 days
- Scott, Thursday
- Grant, Tuesday
- Barry, 9, Thursday
- Monday, Grant
- Grant, Sunday
- Lois, 10
- Barry, Saturday
- Tuesday, 7
- Monday, 22

PAGE 55: **Think Inside the Box**

Key: full = a, three-fourths = b, half = c, one-fourth = d, not begun = e

- | | |
|---|---|
| e | b |
| b | a |

 - one
 - two
 - none (to be half made, exactly two of the four lines of the box must be there)
 - none
 - one

- | | | | |
|---|---|---|---|
| d | a | d | c |
| d | c | b | d |
| c | c | b | d |
| c | c | a | b |

 - sixteen
 - two
 - three
 - six
 - five
 - None

PAGE 56: **In Search of Numbers**

- 2 3. 74 5. 456
- 13 4. 86 6. 108

PAGE 57: **Alien Phenomenon**

	Total number of hands	Inside or outside the asteroid belt
2. Sunev	3	inside
3. Rucremy	4	inside
4. Smar	7	outside
5. Retipuj	5	outside
6. Rutans	1	inside
7. Sunaru	2	inside
8. Enutpen	6	outside
9. Otulp	7	inside

PAGE 58: **One-Hit Wonder**

- 1992 6. 1988
- 1983 7. 1995
- none 8. none
- 1984, 1986 9. 1990
- none

Answer: 1989

PAGE 59: **Break the Code!**

The code (Rebmun number = Earth number):

$$0 = 5 \quad 2 = 3 \quad 4 = 1 \quad 6 = 2 \quad 8 = 7$$

$$1 = 6 \quad 3 = 9 \quad 5 = 8 \quad 7 = 0 \quad 9 = 4$$

- $9 + 0 = 9$
- $4 + 4 = 8$
- $1 + 6 = 7$
- $0 + 0 = 0$
- $4 + 3 = 7$
- $5 + 2 = 7$
- $8 + 1 = 9$
- $2 + 0 = 2$
- $8 + 8 = 16$

PAGE 60: **Oops, Wrong Number**

- 852-4419
- 541-1632
- 352-3911
- 288-2648
- 666-6667
- 650-7997
- 235-5799
- 415-4444
- 723-1651
- 453-4231

5.NBT.7

name: Answer Key Date: _____

Adding & Subtracting Decimals

Find two numbers that have a sum of 77.95 and a difference of 30.61...

54.28

and

23.67

Work Space:

$$\begin{array}{r} 54.28 \\ + 23.67 \\ \hline 77.95 \end{array}$$

$$\begin{array}{r} 312 \\ 54.28 \\ - 23.67 \\ \hline 30.61 \end{array}$$

Explain how you found the two numbers...

I started with $(52.45) + 25.50 = 77.95$, yet I knew that was wrong b/c $52.45 - 25.50 = 26.95$, which was too low. So, I tried a larger number to start.

$(54.25) + 23.70 = 77.95$, yet $54.25 - 23.70 = 30.55$, which is still too low, but close. So, I kept on until I found

$(54.28) + 23.67 = 77.95$ and $54.28 - 23.67 = 30.61$.

Strategies

5.NBT.7

name: Answer Key

Date: May

Differ

Multiplying & Dividing Decimals

Find two decimals that have a product of 0.2 and a quotient of 0.8...

0.4

and

0.5

Work Space:

1st try

$$\begin{array}{r} .30 \\ \times .96 \\ \hline 0.288 \\ \text{close} \end{array}$$

$$\begin{array}{r} .3125 \\ .96 \overline{) .30} \end{array}$$

way off

I need numbers closer together.

2nd try

$$\begin{array}{r} .40 \\ \times .60 \\ \hline .24 \\ \text{close} \end{array}$$

$$.40 \div .60 = .67$$

better, but not close enough

final answer

$$\begin{array}{l} 0.4 \times 0.5 = 0.2 \\ 0.4 \div 0.5 = 0.8 \end{array}$$

Explain how you found the two numbers...

I used the guess and check strategy to multiply and divide numbers until I arrived at the correct answers. I also had to know my vocabulary to multiply to find the product and divide the two numbers to find the quotient.

5.MD.5

Name: Answer Key

Date: _____

Volume of Rectangular Prisms

Use equations and illustrations to solve each...

Martha packed a box with a volume of 336 cubic inches. If the box is 8 inches wide and 7 inches high, what is the length of the box?

$l = \text{length}$

$$l \times 8 \text{ in.} \times 7 \text{ in.} = 336 \text{ in.}^3$$

(width) (height)

$$l \times 56 \text{ in.} = 336 \text{ in.}^3$$

Since
 $336 \div 56 = 6$

$l = 6 \text{ in.}$

$6 \times 8 \times 7 = 336$
The length is 6 in.

Bobby built a planter with a volume 36 cubic feet. If the planter is 2 feet high and 3 feet in length, what is the width of the planter?

$$2 \text{ ft.} \times 3 \text{ ft.} \times w = 36 \text{ ft.}^3$$

$$6 \text{ ft.} \times w = 36 \text{ ft.}^3$$

$$36 \div 6 = 6$$

$$2 \text{ ft.} \times 3 \text{ ft.} \times 6 \text{ ft.} = 36 \text{ ft.}^3$$

The width of the planter is 6 ft.

Explain how you found your answers:

I used a variable to show the missing value for the formula $l \times w \times h = \text{volume}$. I also used inverse operations (division in this case) to find the value of the variable.

5.G.4

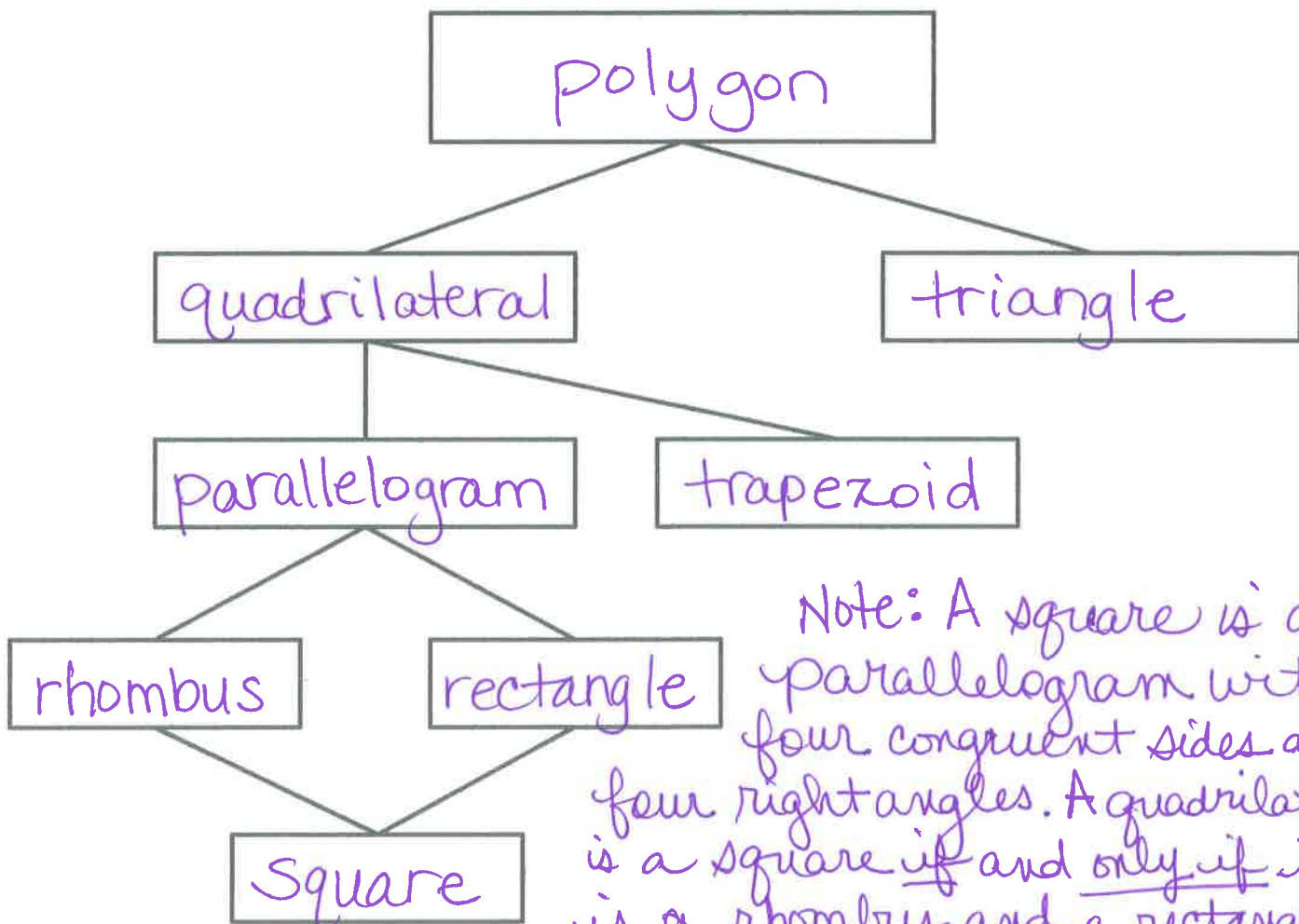
name: Answer Key Date: _____

Hierarchy of Two-Dimensional Figures

Use the terms in the word bank to complete the hierarchy of two-dimensional figures...

WORD BANK:

trapezoid parallelogram polygon square
quadrilateral rectangle rhombus triangle



Note: A square is a parallelogram with four congruent sides and four right angles. A quadrilateral is a square if and only if it is a rhombus and a rectangle.