SeniorBrainHealth.org
Empower the mind!

Senior Brain Health Program

Level 1 Samples

Problem-Solving Puzzles & Activities to Sharpen the Mind

ABOUT THESE SAMPLES

As many seniors settle into retirement and senior living, they often do less problem-solving and analysis than they did in their younger years. Solving crossword and jigsaw puzzles involves problem-solving and has some cognitive benefits, but only exercises a narrow set of thinking skills.

We are a dedicated team of seasoned educators with over 60 years of experience teaching and developing problem-solving and analysis skills. Our inspiration for this program comes from the groundbreaking ACTIVE Study by the University of Alabama and Penn State University, which involved over 2,800 adults aged 65 and older. Participants received 5-6 weeks of cognitive skill training. The study demonstrated significant improvements in cognitive abilities (memory, reasoning, speed of processing information) to some degree, 10 years after the training.

Drawing on the ACTIVE study and our educational expertise in teaching critical thinking, we concluded the most effective senior brain maintenance program should focus on a wide variety of engaging problem-solving and analysis skills to enhance cognitive resilience and improve everyday executive function. Our robust Senior Brain Health Program (384 pages with detailed answers) develops and exercises the following skills:

- Deductive Reasoning
- Inferential Reasoning
- Spatial Reasoning
- Associative Reasoning
- Memory
- Identification and Evaluation of Evidence
- Evaluation of Inferences
- Reading Comprehension
- Mathematical Reasoning (with a focus on mental math)
- Observation
- Sequencing
- Classifying
- Reasoning by Analogy
- Verbal and Written Communication
- Vocabulary Analysis

These skills are honed through engaging paper-and-pencil activities designed to be fun, stimulating, effective, and easy to use. Other benefits include:

- Affordable, reproducible activities for ongoing stimulation
- Both individual and group activities to foster social interaction
- Print and eBook formats for convenience
- Two levels of challenge to choose from

FREE SHIPPING OFFER

About SeniorBrainHealth.org

Join us at SeniorBrainHealth.org to access free sample activities, informative articles, and insights into senior cognitive health. Let's empower you or your loved ones to thrive with sharper mental acuity and an enriched quality of life.

At SeniorBrainHealth.org, we are a dedicated team of seasoned educators with over 60 years of teaching and developing problem-solving and analysis skills. Our journey began with a deep-rooted passion for education and a commitment to enhancing cognitive wellness among seniors.

Inspired by groundbreaking research, including studies reported in the journal Psychological Science, which found cognitive benefits for seniors learning new skills, and the transformative findings from the ACTIVE Study funded by the National Institutes of Health, we are driven in our mission to empower older adults with the tools they need to maintain and strengthen their mental faculties.

TABLE OF CONTENTS

REBUS PUZZLE

DIRECTIONS: Look at each graphic to find the common phrase it represents.

TREASON

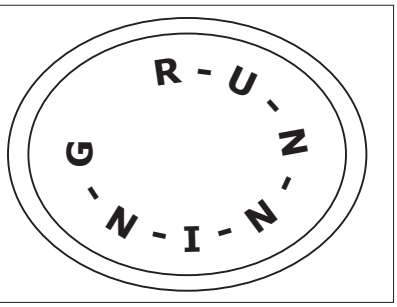
_ _ _ g _ _
_ _ _ e _ _ _ _ _

PANTS
PANTS

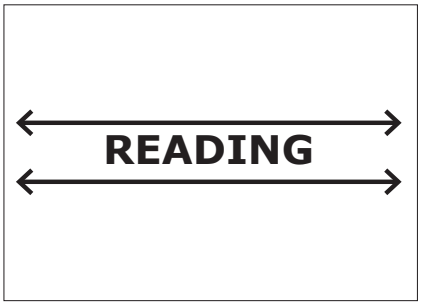
_ _ _ _ _ i _ _ _ _ _
_ _ _ n _ _ _

ARRIVED
TIME

_ _ _ _ _ _ e _ _
_ n _ _ _ _ _ _



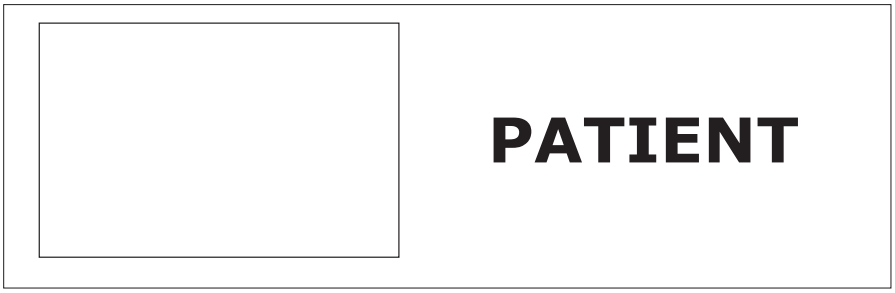
_ _ _ n _ _ _ _ _
_ _ _ _ _ _ _ _ n
_ _ _ c _ _ _ _



_ _ a _ _ _ _ _
_ _ _ w _ _ _ _
_ _ _ _ _ _ _ _ s

N
E
V
E
S

_ _ _ _ _ _ -- _ p



_ _ t _ _ _ _ _ _ _ _

FAMALLILY

_ _ _ l _ _ _ _ _ _ _ _
_ _ _ _ _ i _ _ _

VERB
+ VERB

_ d _ _ _ _ _ _

MILL1ION

_ _ _ _ _ n _ _
_ _ _ l _ _ _ _ _

IDEALS

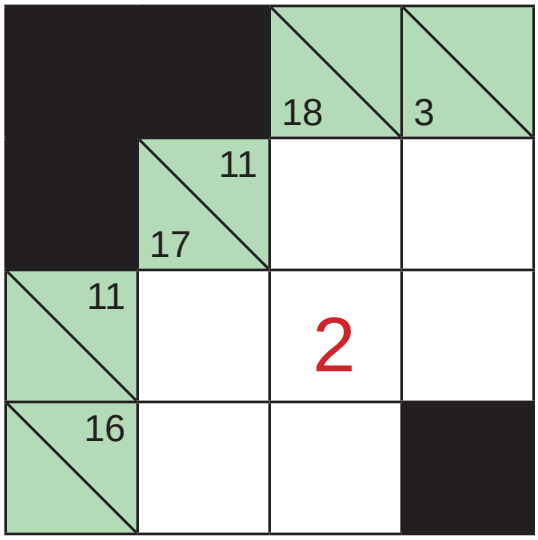
_ _ _ g _ _
_ _ _ _ _ _ _ _

** Answer page 16 **

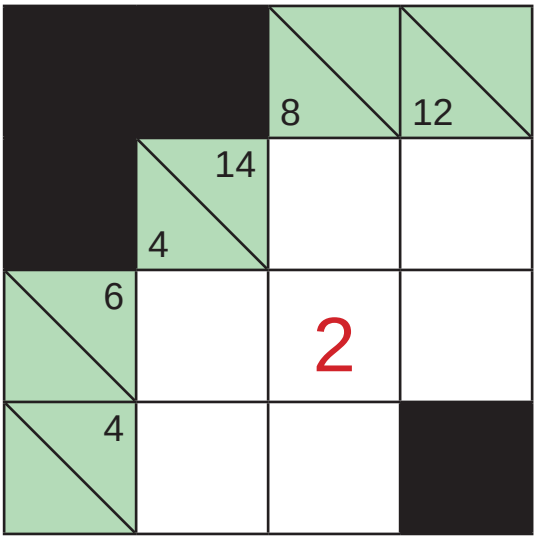
CROSS NUMBER

- A number below a diagonal line shows the sum for the squares underneath.
- A number above a diagonal line shows the sum for the squares to the right.
- You may use only the digits 1 through 9 (one digit per square).
- You may not use any digit in the same row or column more than once to get a sum.

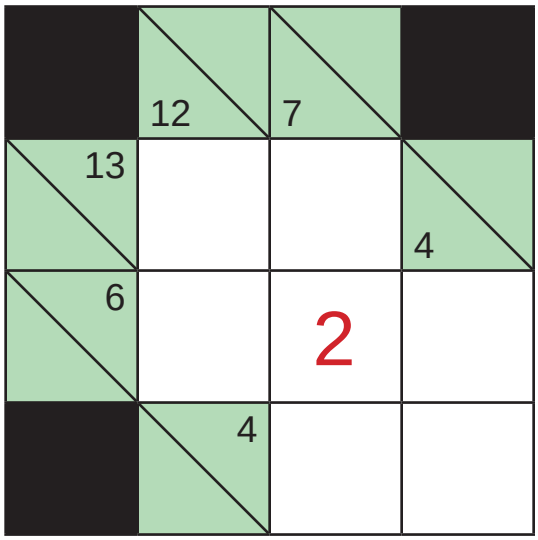
1.



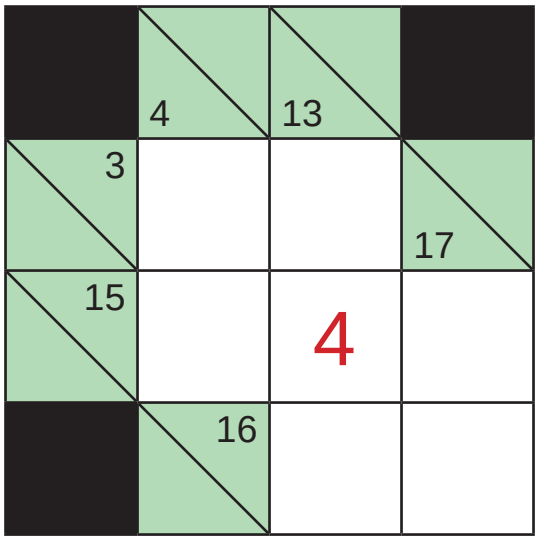
2.



3.



4.



** Answer page 16 **

SIMILARITIES - ANIMALS

DIRECTIONS: Circle the animal that is most like the first animal.

EXAMPLE:


zebra

a. 
elephant

b. 
giraffe

c. 
horse

1:


chicken

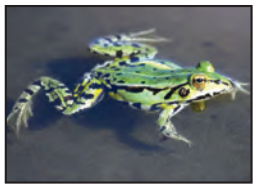
a. 
duck

b. 
owl

c. 
turkey

2:


snake

a. 
frog

b. 
lizard

c. 
spider

3:


bee

a. 
ant

b. 
spider

c. 
butterfly

4:


shark

a. 
catfish

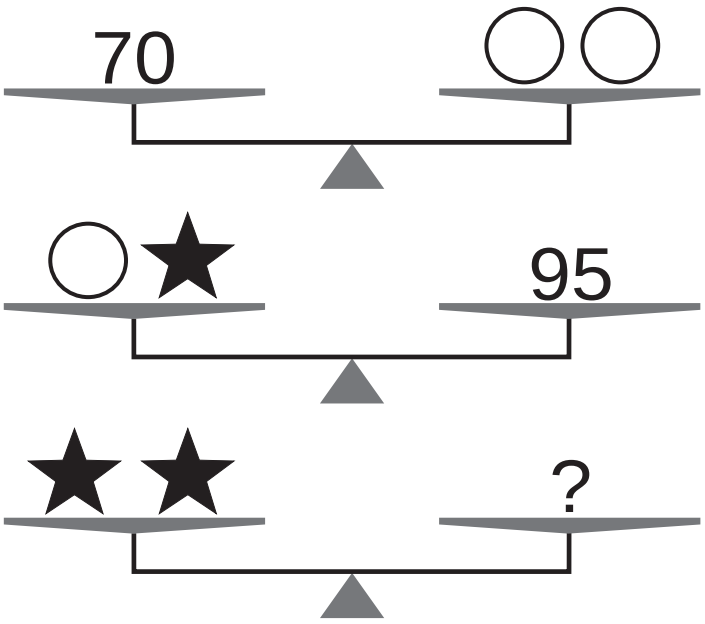
b. 
tuna

c. 
whale

** Answer page 16 **

BALANCE MATH

DIRECTIONS: Use the balanced scales to find the missing numbers.

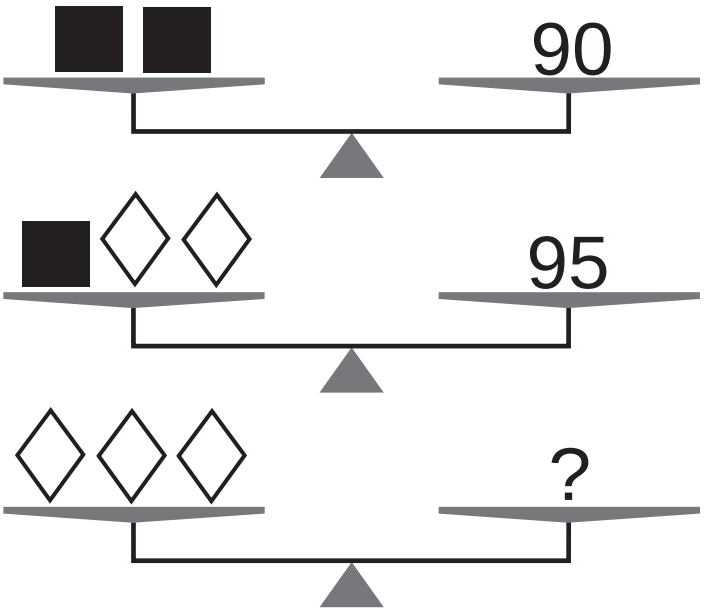


Problem 1

○ = ...

★ = ...

? = ...



Problem 2

■ = ...

◇ = ...

? = ...

** Answer page 16 **

SNAKES

Observing and Reading for Evidence – Deduction

[1]Rinaldo saw one of these snakes in the grass and rocks behind his house. [2]He described the snake as colorful and striped. [3]He added that it was mostly orange or red but also had a second and third color. [4]His older sister said it was probably the King snake in the middle picture.

DIRECTIONS: Think of the evidence for each answer in the article and picture, then circle the best answer.

1. Rinaldo's sister does not think the other two snakes are King snakes.
   True False Unknown

2. Rinaldo saw a colorful, striped snake behind his house.
   True False Unknown

3. Rinaldo's sister has also seen snakes behind their family's house.
   True False Unknown

4. The snake on the left matches the snake Rinaldo described.
   True False Unknown

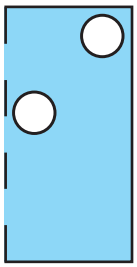
5. The snake on the right is the only snake that matches Rinaldo's description.
   True False Unknown

** Answer page 17 **

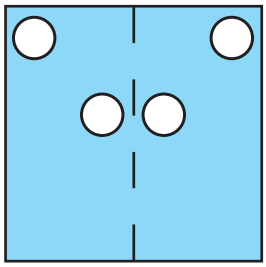
PAPER FOLDING

DIRECTIONS: The figure on the left shows a sheet of paper with holes punched in it and folded along the dotted line. Circle how the sheet will look when it is unfolded.

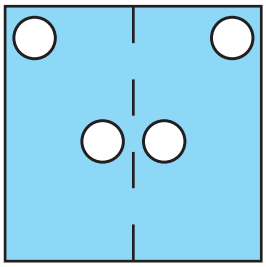
1:



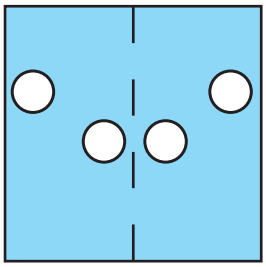
a.



b.

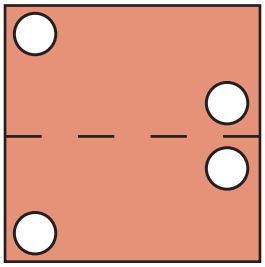


c.

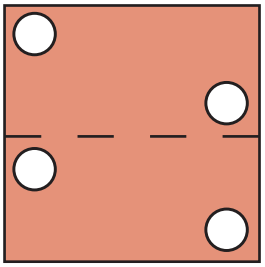


2:

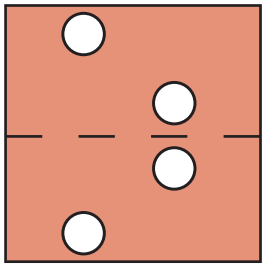
a.



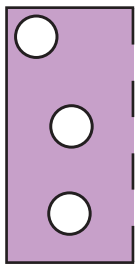
b.



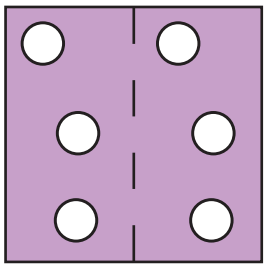
c.



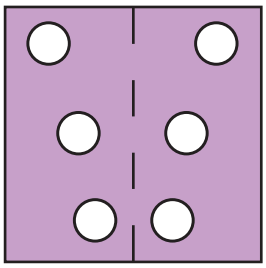
3:



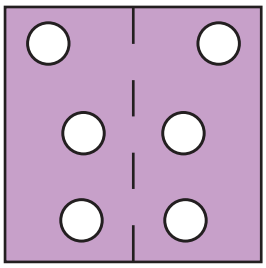
a.



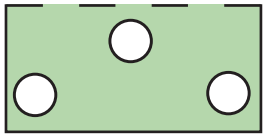
b.



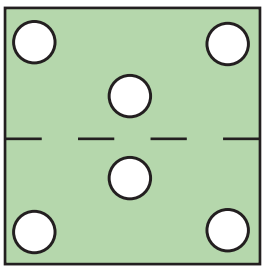
c.



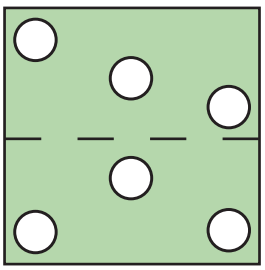
4:



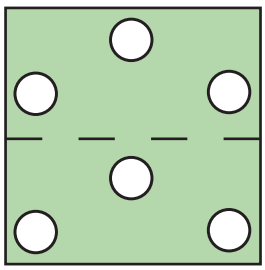
a.



b.



c.



** Answer page 17 **

MIND BENDERS®

Reading Comprehension and Deductive Reasoning

DIRECTIONS: Fill in the chart using + for yes or – for no as you solve the puzzle. Be sure to mark all the – (no) answers from each clue to help find all the + (yes) answers.

Name the Animals

	Angel	Beauty	King	Rover
cat				
dog				
goat				
horse				

A cat, a small dog, a goat, and a horse are named Angel, Beauty, King, and Rover. Read the clues to find each animal's name.

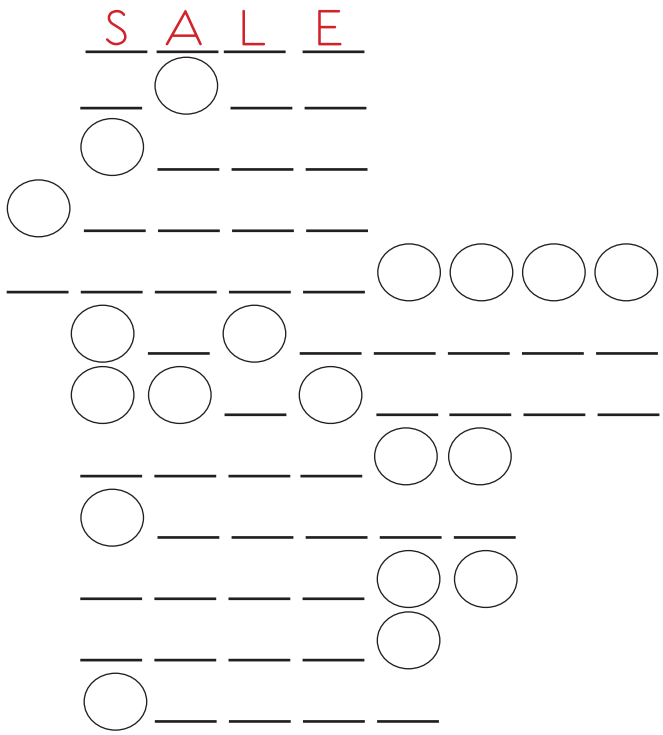
1. King is smaller than both the dog and Rover.
2. The horse is younger than Angel.
3. Beauty is the oldest and is a good friend of the dog.

** Answer page 17 **

WORD BENDERS – SIMILARITIES

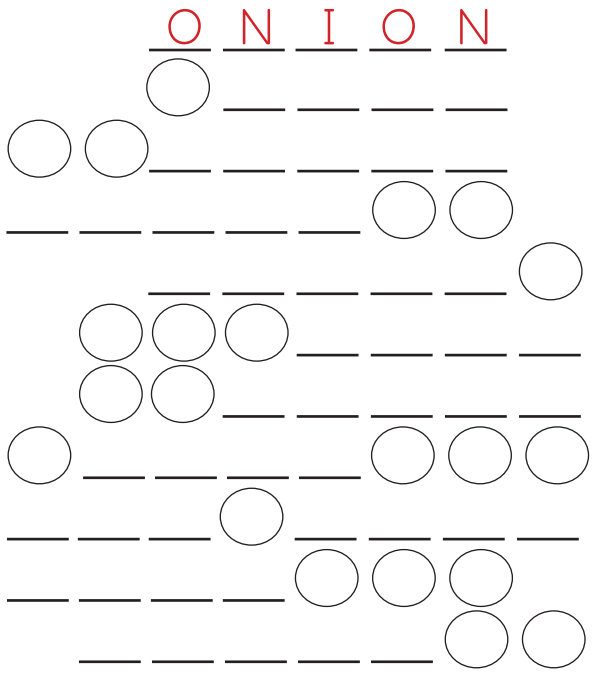
DIRECTIONS: Use the clue word to the right to identify the word with a similar meaning. A blank line indicates the letter above does not change. A circle indicates a new letter.

1:



purchase
only
cavity
complete
healthful
solitary
attractive
touch
light
frank
confection
gritty

2:



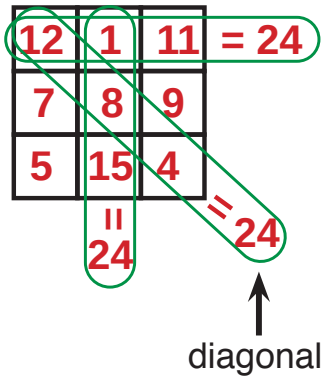
leek
combining
gathering
recombine
joined
stimulated
tell
valuable
prior
prohibit
vengeance

** Answer page 17 **

NUMBER NINJA

In a Magic Square the numbers in each row, column, and diagonal add up to the same number. For the example shown, the sum for each row, column, and diagonal is 24.

Fill in all empty squares to create magic squares with the indicated sums. Remember to check the sum for each of the square's two diagonals.



1.

sum = 18

9		7
		3

2.

sum = 30

	10	
9		13

3.

sum = 21

8		
	7	11

4.

sum = 40

19			3
	12		13
6		1	
10	7		

5.

sum = 24

	7	9	5
	6	2	
3	7		5

6.

sum = 70

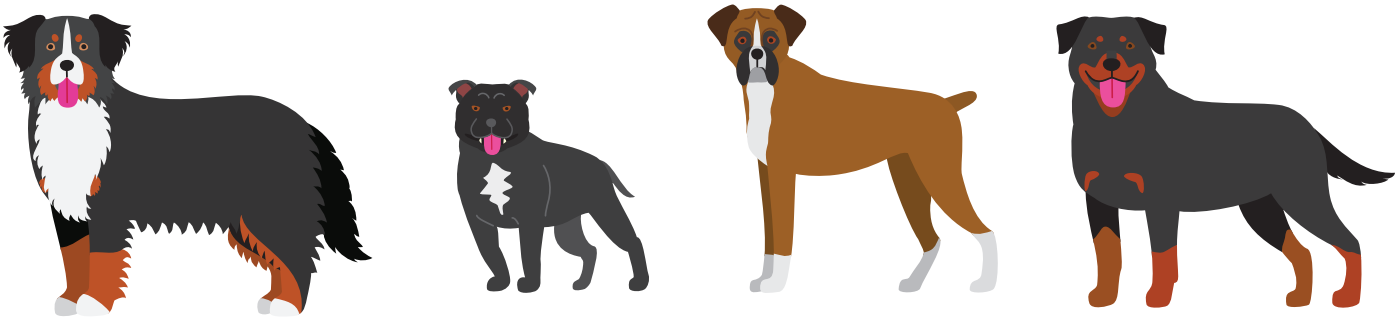
30		14	
	16		
	23		21
9		25	19

** Answer page 18 **

THE LOST DOG

Observing and Reading for Evidence – Deduction

Sergio's family is looking for one of their dogs. The animal rescue shelter has these four lost dogs. Sergio said his dog has black hair on his face and dark ears. Sergio's sister said their dog has some white hair on his chest. Sergio's father said their dog is mostly black, but also has two other colors of hair. Sergio's mother said that their dog does not have black paws or a short tail.



DIRECTIONS: Think of the evidence for each answer in the article and picture, then circle the best answer.

1. Circle the dog that could be Sergio's family's dog. Next, point to each of the other dogs and explain why it could not be their dog.

2. The rescue shelter has Sergio's family's dog.

	True	False	Unknown
3. Sergio's family only has one dog.	True	False	Unknown
4. Sergio has at least one sister.	True	False	Unknown
5. Sergio's family's dog is a male.	True	False	Unknown

** Answer page 18 **

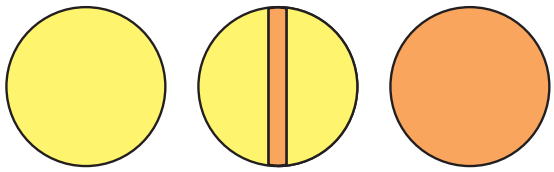
DESCRIBING GROUPS

DIRECTIONS: Circle the letter in front of each true statement.

EXAMPLE:

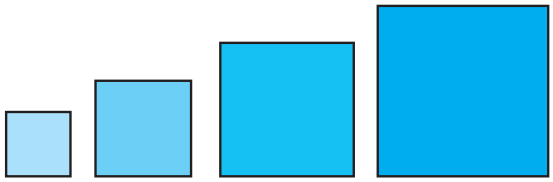
a. All the figures are triangles.
b. All the figures are green.
c. All the figures are wide.
d. All the figures have a right angle.

1:



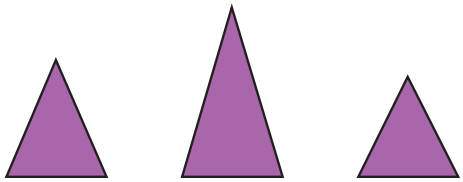
a. All the figures are circles.
b. All the figures are the same color.
c. All the figures are the same size.
d. All the figures have straight lines.

2:



a. All the figures are the same size.
b. All the figures are the same shade.
c. All the figures are blue.
d. All the figures are squares.

3:

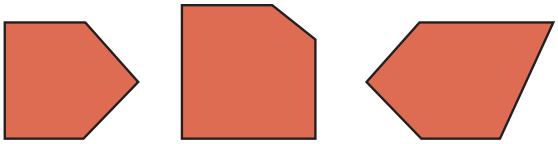


a. All the figures are triangles.
b. All the figures are purple.
c. All the figures are the same size.
d. All the figures have two equal sides.

4:

a. All the figures are the same shape.
b. All the figures are the same color.
c. All the figures have four sides.
d. All the figures are the same size.

5:

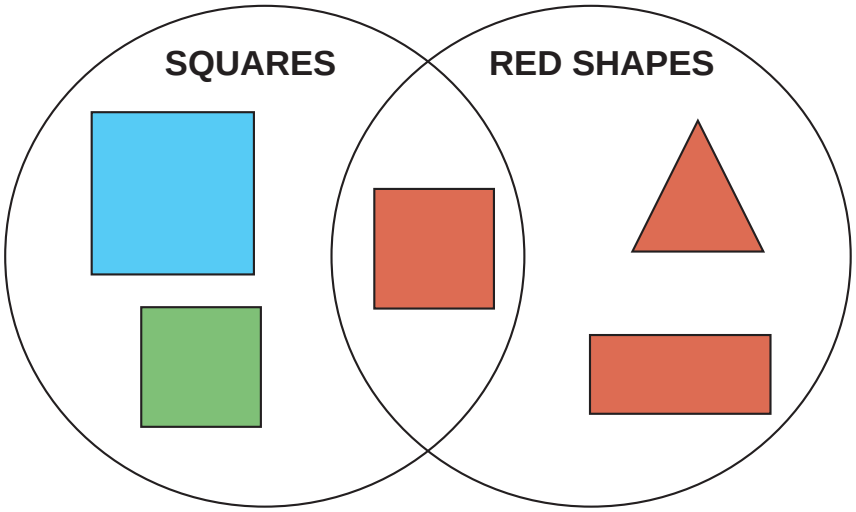


a. All the figures have four sides.
b. All the figures have five sides.
c. All the figures are the same shape.
d. All the figures are gray.

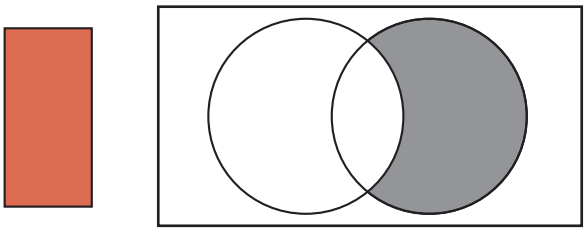
** Answer page 18 **

OVERLAPPING GROUPS

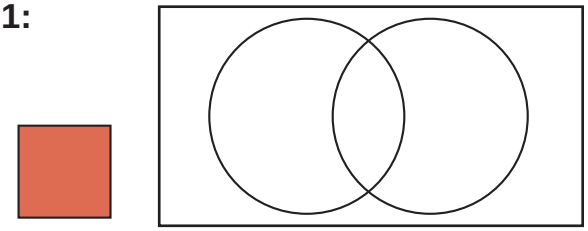
DIRECTIONS: Notice where the shapes are placed in the circles at the top. Sometimes shapes fit more than one class. The red shape in the middle is also a square. It fits where the classes overlap. Use a pencil to shade the part of the diagram where each figure belongs.



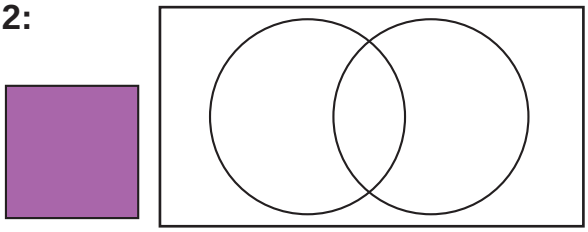
EXAMPLE:



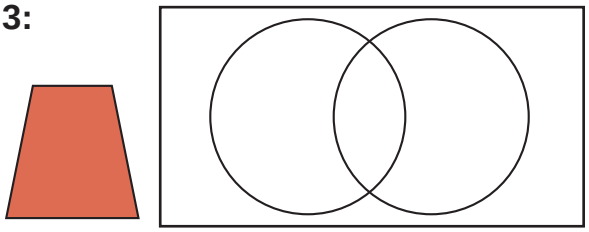
1:



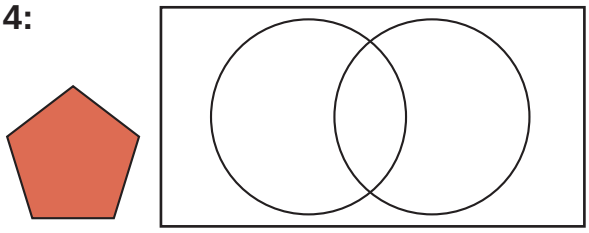
2:



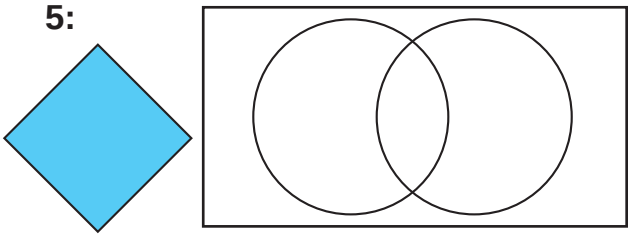
3:



4:



5:



** Answer page 18 **

CLASSES WITHIN CLASSES – GENERAL TO SPECIFIC

DIRECTIONS: Write how the words in the choice box are related, from the largest, general class to the smallest, most specific class. Explain the relationship between the classes.

1:

Choice Box

citrus fruit tangerine

_____ general

_____

_____ specific

_____

_____

_____

2:

Choice Box

ant arthropod insect

_____ general

_____

_____ specific

_____

_____

_____

3:

Choice Box

hammer hardware tool

_____ general

_____

_____ specific

_____

_____

_____

4:

Choice Box

bird duck mallard

_____ general

_____

_____ specific

_____

_____

_____

** Answer page 19 **

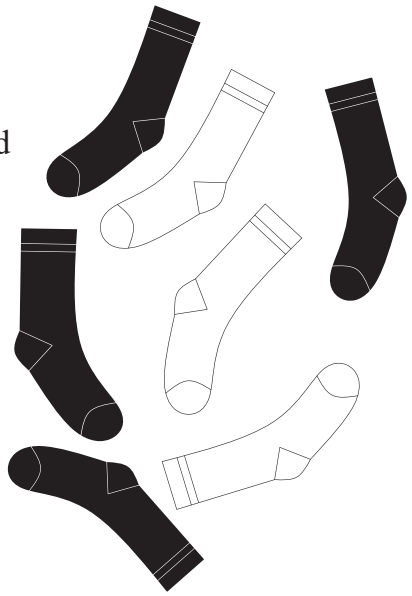
BRAIN FOOD

Logical Problem Solving

DIRECTIONS: Use a pencil to solve these two problems.

1. The Socks Problem

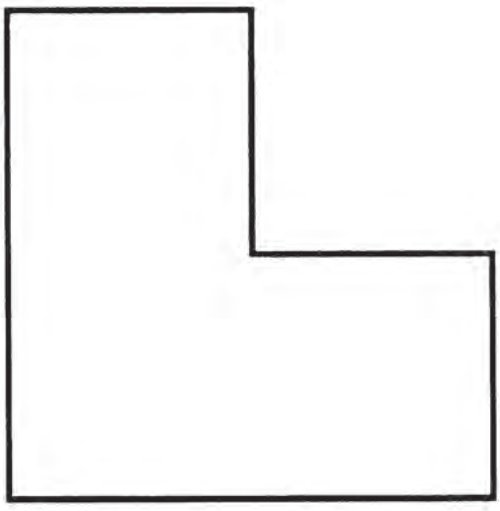
Hanna's stepfather is a volunteer fireman. He wears only black socks and white socks. One night after a storm, the lights go out and he must go into town to help put out a fire. He gets up in the dark, reaches into his drawer, and grabs one sock. How many more socks must he grab to make sure he has a matching pair?



_____

2. The Land Must Be Divided

Four daughters have to split this land into 4 equal parts. The parts must be congruent (they must have the same size and shape). Show how it can be done. Be sure to use pencil and eraser!

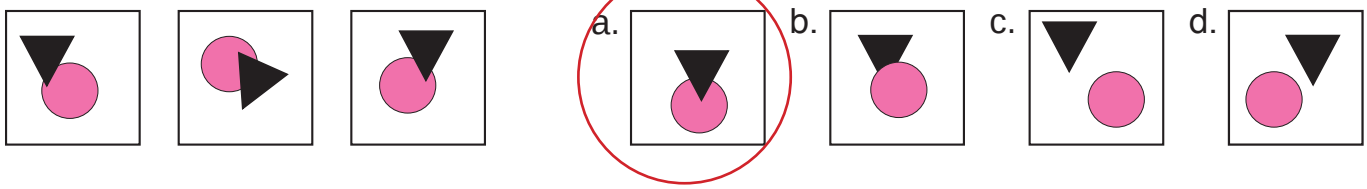


** Answer page 19 **

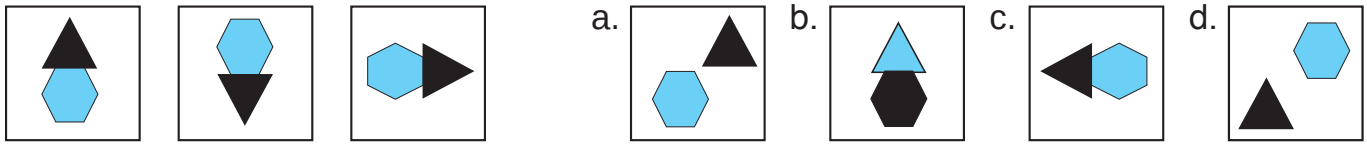
SELECT DETAILS THAT BELONG TO A GROUP

DIRECTIONS: Circle the figure that has the same details as the group on the left.

EXAMPLE:

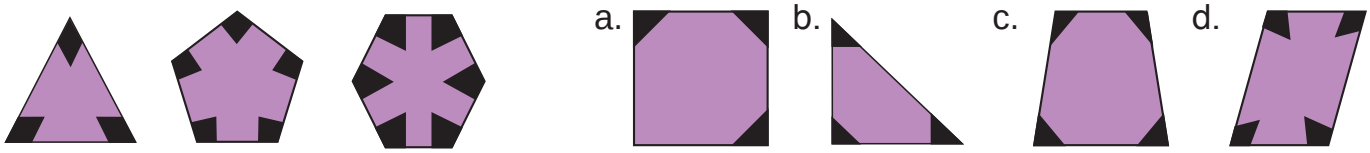


1:

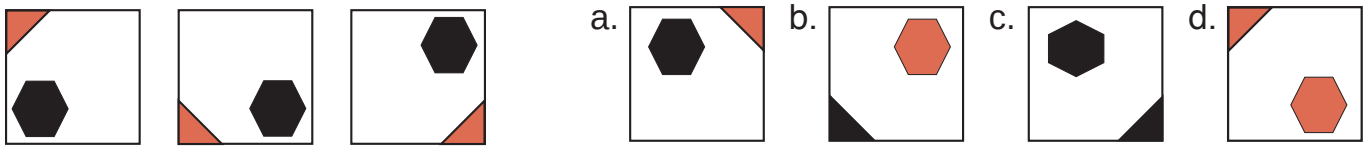


2:

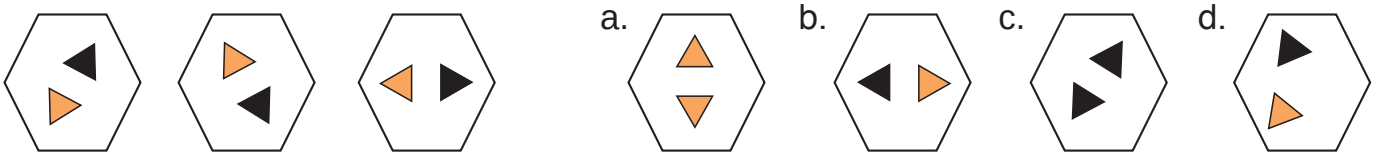
3:



4:



5:



** Answer page 19 **

ANSWERS

Page 1

REBUS PUZZLE

DIRECTIONS: Look at each graphic to find the common phrase it represents.

TREASON — high treason

PANTS PANTS — a pair of pants

ARRIVED TIME — arrived on time

R-U-N-N-I-N-G — running around in circles

READING — reading between the lines

NEVES — seven-up

PATIENT — outpatient

FAMALLILY — all in the family

VERB + VERB — adverbs

MILL1ION — one in a million

IDEALS — high ideals

Page 2

CROSS NUMBER

- A number below a diagonal line shows the sum for the squares underneath.
- A number above a diagonal line shows the sum for the squares to the right.
- You may use only the digits 1 through 9 (one digit per square).
- You may not use any digit in the same row or column more than once to get a sum.

1.

	18	3
11	9	2
17	8	1
11	2	3
16	9	7

2.

	8	12
14	5	9
4	1	2
6	3	1
4		

3.

	12	7
13	9	4
6	3	2
4	1	3

4.

	4	13
3	1	2
15	3	4
16	7	9

Page 3

SIMILARITIES - ANIMALS

DIRECTIONS: Circle the animal that is most like the first animal.

EXAMPLE: zebra — a. elephant, b. giraffe, c. horse

1: chicken — a. duck, b. owl, c. turkey

2: snake — a. frog, b. lizard, c. spider

3: bee — a. ant, b. spider, c. butterfly

4: shark — a. catfish, b. tuna, c. whale

Page 4

BALANCE MATH

DIRECTIONS: Use the balanced scales to find the missing numbers.

70 = ○ ○

○ ★ = 95

★ ★ = ?

Problem 1

○ = 35

★ = 60

? = 120

■ ■ = 90

■ ◇ ◇ = 95

◇ ◇ ◇ = ?

Problem 2

■ = 45

◇ = 25

? = 75

Page 5

SNAKES

1. Unknown; Sentence 4 tells us that Rinaldo's sister thinks Rinaldo saw the snake in the middle photo and she thinks it is a King snake, but there is no evidence telling us what type of snake she thinks the other two snakes are.

2. True; Sentence 1 tells us that Rinaldo saw a snake in the grass and rocks behind his house. Sentence 2 tells us he described the snake he saw as colorful and striped.

3. Unknown; Sentence 4 tells us that Rinaldo's sister thinks Rinaldo saw the snake in the middle photo and says it is a King snake, but there is no evidence she has or has not seen a snake or snakes behind their family's house herself.

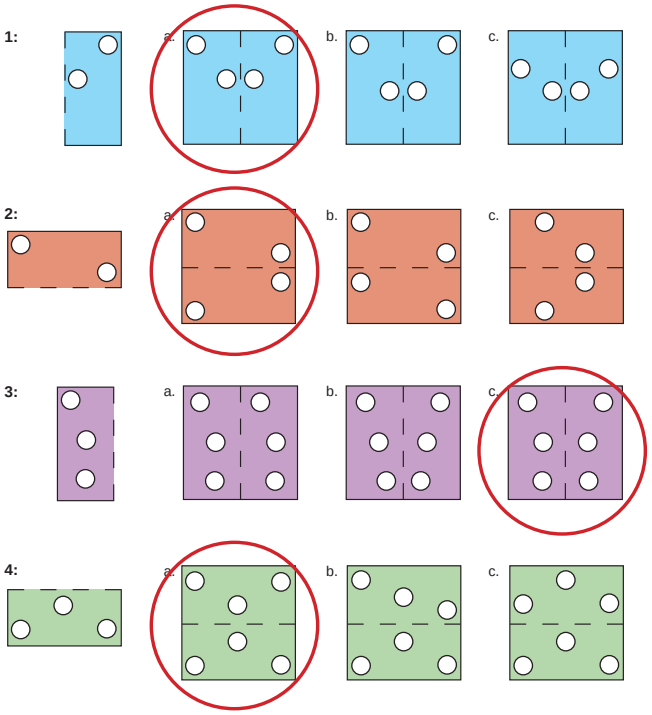
4. False; Sentence 2 tells us the snake Rinaldo described a colorful, striped snake. In sentence 3 he adds that the snake was mostly orange or red, but also had a second and third color. The snake on the left is not mostly orange or red.

5. True; Sentence 2 tells us the snake Rinaldo described a colorful, striped snake. In sentence 3 he adds that the snake was mostly orange or red, but also had a second and third color. The snake on the left is not mostly orange or red. The snake in the middle has a black stripe on both sides of each red or yellow stripe, so it is more black than orange or red. The snake on the right is mostly orange or red, but also has white and black coloring, so it is the only snake that is mostly orange or red with 2 other colors.

Page 6

PAPER FOLDING

DIRECTIONS: The figure on the left shows a sheet of paper with holes punched in it and folded along the dotted line. Circle how the sheet will look when it is unfolded.



Page 7

MIND BENDERS®

Reading Comprehension and Deductive Reasoning

DIRECTIONS: Fill in the chart using + for yes or – for no as you solve the puzzle. Be sure to mark all the – (no) answers from each clue to help find all the + (yes) answers.

Name the Animals

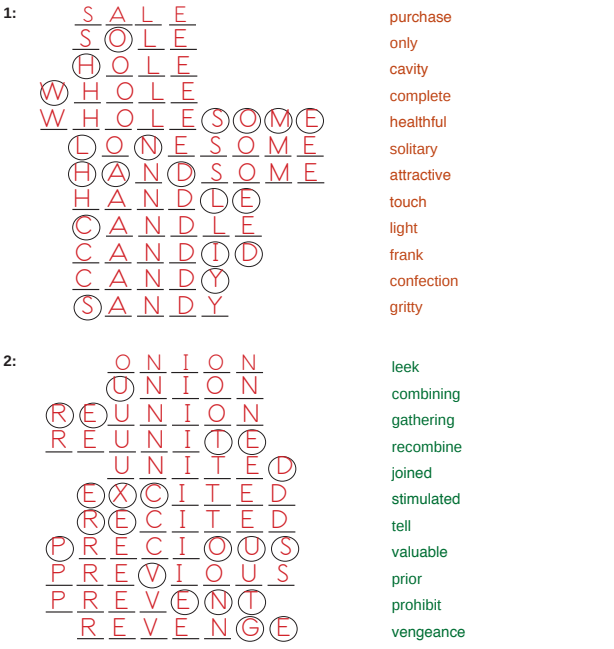
	Angel	Beauty	King	Rover
cat	–	–	+	–
dog	+	–	–	–
goat	–	+	–	–
horse	–	–	–	+

King is smaller than the small dog (1), so King isn't the goat or the horse (or the dog). Then King is the cat. The dog is not Rover (1) or Beauty (3), so it is Angel. The horse is not the oldest (2), but Beauty is the oldest (3), so Beauty is not the horse. Then the horse is Rover, and Beauty is the goat.

Page 8

WORD BENDERS – SIMILARITIES

DIRECTIONS: Use the clue word to the right to identify the word with a similar meaning. A blank line indicates the letter above does not change. A circle indicates a new letter.

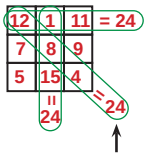


Page 9

NUMBER NINJA

In a Magic Square the numbers in each row, column, and diagonal add up to the same number. For the example shown, the sum for each row, column, and diagonal is 24.

Fill in all empty squares to create magic squares with the indicated sums. Remember to check the sum for each of the square's two diagonals.



1.

sum = 18

9	2	7
4	6	8
5	10	3

2.

sum = 30

7	12	11
14	10	6
9	8	13

3.

sum = 21

8	9	4
3	7	11
10	5	6

4.

sum = 40

19	4	14	3
5	12	10	13
6	17	1	16
10	7	15	8

5.

sum = 24

10	4	4	6
3	7	9	5
8	6	2	8
3	7	9	5

6.

sum = 70

30	14	14	12
10	16	26	18
21	23	5	21
9	17	25	19

Page 10

THE LOST DOG

Observing and Reading for Evidence – Deduction

2nd dog: Sergio's mother said their dog does not have black paws or a short tail.
3rd dog: Sergio's father said their dog is mostly black.
4th dog: Sergio's sister said their dog has some white hair on his chest.

2. Unknown; We know one of the dogs in the shelter matches the family's description, but that doesn't tell us this is Sergio's family's dog. It "could" be their dog based on their description, but other dogs could match this description too.

3. False; The story says the family is "looking for one of their dogs", so the family has more than one dog.

4. True; The story tells us that Sergio's sister described the dog, so Sergio has at least one sister.

5. True; Sergio describes his dog as having black hair on "his" face and dark ears. Sergio's sister describes the dog as having some white hair on "his" chest, so the lost dog is a male.

Page 11

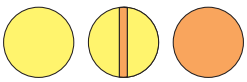
DESCRIBING GROUPS

DIRECTIONS: Circle the letter in front of each true statement.

EXAMPLE:

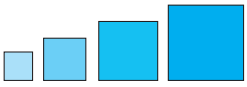
(a.) All the figures are triangles.
(b.) All the figures are green.
c. All the figures are wide.
(d.) All the figures have a right angle.

1:



(a.) All the figures are circles.
b. All the figures are the same color.
(c.) All the figures are the same size.
d. All the figures have straight lines.

2:



a. All the figures are the same size.
b. All the figures are the same shade.
(c.) All the figures are blue.
(d.) All the figures are squares.

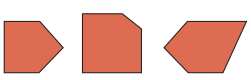
3:

(a.) All the figures are triangles.
(b.) All the figures are purple.
c. All the figures are the same size.
(d.) All the figures have two equal sides.

4:

a. All the figures are the same shape.
b. All the figures are the same color.
(c.) All the figures have four sides.
d. All the figures are the same size.

5:

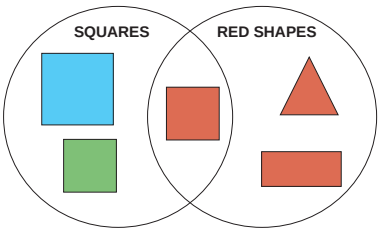


a. All the figures have four sides.
(b.) All the figures have five sides.
c. All the figures are the same shape.
d. All the figures are gray.

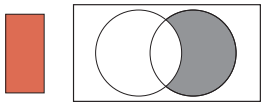
Page 12

OVERLAPPING GROUPS

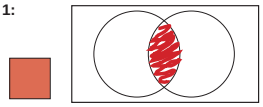
DIRECTIONS: Notice where the shapes are placed in the circles at the top. Sometimes shapes fit more than one class. The red shape in the middle is also a square. It fits where the classes overlap. Use a pencil to shade the part of the diagram where each figure belongs.



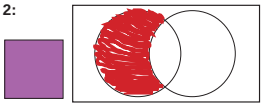
EXAMPLE:



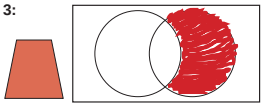
1:



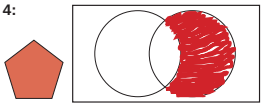
2:



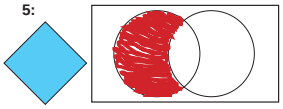
3:



4:



5:



Page 13

CLASSES WITHIN CLASSES – GENERAL TO SPECIFIC

DIRECTIONS: Write how the words in the choice box are related, from the largest, general class to the smallest, most specific class. Explain the relationship between the classes.

1:

Choice Box

citrus fruit tangerine

fruit (general)
citrus
tangerine (specific)

Citrus is a kind of fruit. A tangerine is a kind of citrus.

2:

Choice Box

ant arthropod insect

arthropod (general)
insect
ant (specific)

Insect is a kind of arthropod. Ant is a kind of insect.

3:

Choice Box

hammer hardware tool

hardware (general)
tool
hammer (specific)

A tool is a kind of hardware. A hammer is a type of tool.

4:

Choice Box

bird duck mallard

bird (general)
duck
mallard (specific)

A duck is a type of bird. A mallard is a kind of duck.

Page 14

BRAIN FOOD

Logical Problem Solving

DIRECTIONS: Use a pencil to solve these two problems.

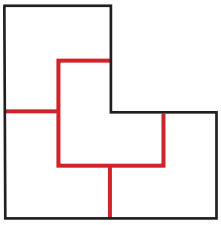
1. The Socks Problem

Hanna's stepfather is a volunteer fireman. He wears only black socks and white socks. One night after a storm, the lights go out and he must go into town to help put out a fire. He gets up in the dark, reaches into his drawer, and grabs one sock. How many more socks must he grab to make sure he has a matching pair?

1. He needs to grab two more socks to be sure of a pair.

2. The Land Must Be Divided

2. The land can be divided like this:

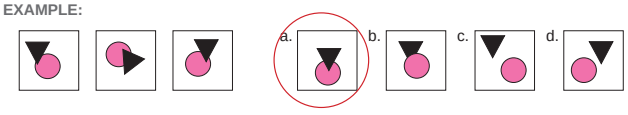


Page 15

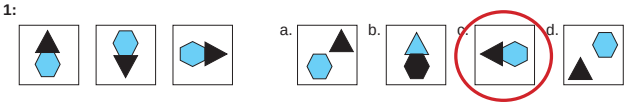
SELECT DETAILS THAT BELONG TO A GROUP

DIRECTIONS: Circle the figure that has the same details as the group on the left.

EXAMPLE:

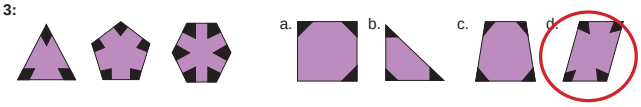


1:

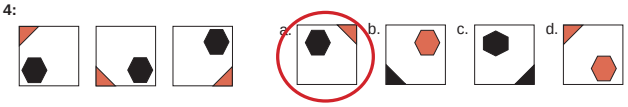


2:

3:



4:



5: