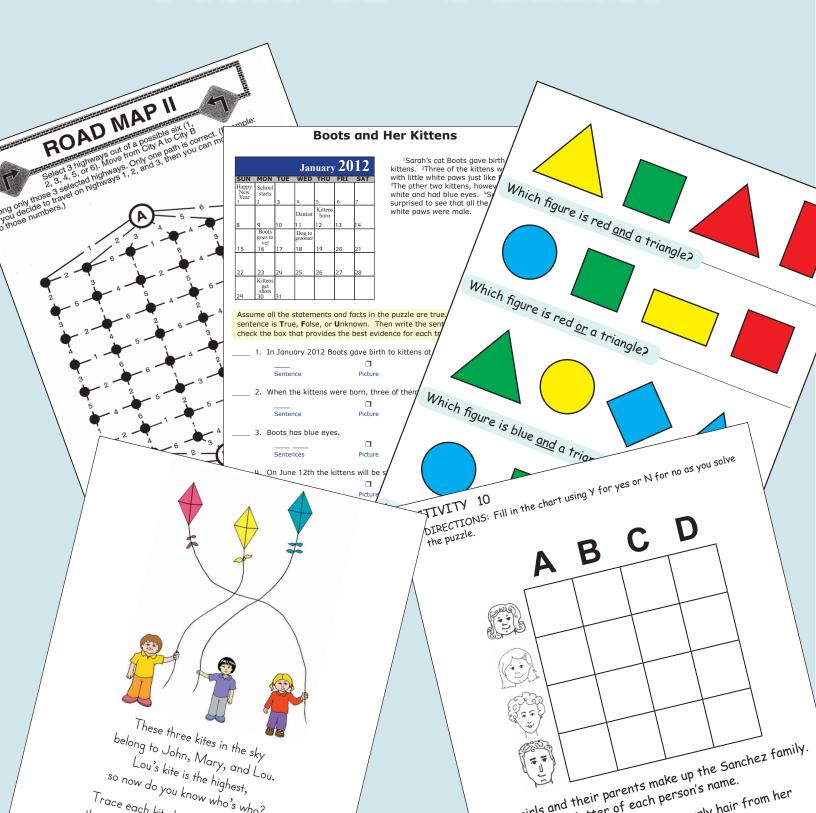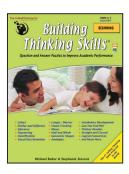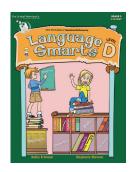# 150+ Award-Winning PreK-12+ Books and Software!

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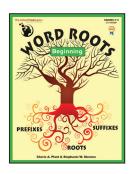
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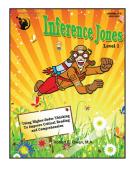
The Critical Thinking Co.™ is recommended by Mensa, Learning® Magazine, the Well-Trained Mind, Dr. Toy, Creative Child Magazine, and is used by Sylvan Learning Centers, Club Z In-Home Tutoring, leading U.S. public schools, and gifted and talented programs in 57 countries throughout the world. We guarantee better grades and higher test scores–or your money back.

Table of Contents

These three kites in the sky
belong to John, Mary, and Lou.
Lou's kite is the highest,
so now do you know who's who?

Trace each kite back to the ground,
then name each flyer that you found.
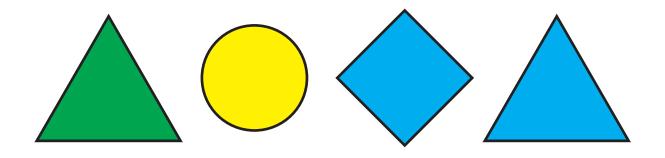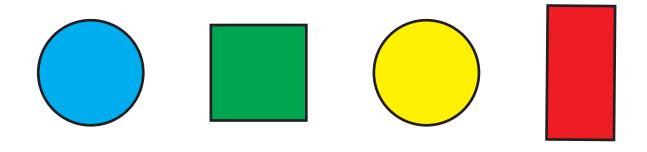
Which figure is red <u>and</u> a triangle? _____

Which figure is red <u>or</u> a triangle? _____

Which figure is blue <u>and</u> a triangle? _____

Which figure is blue <u>or</u> a triangle? _____

Which picture happened first?
Which picture happened next?
Which picture happened last?
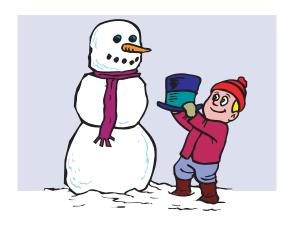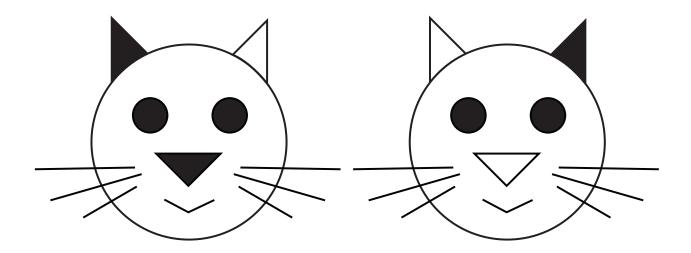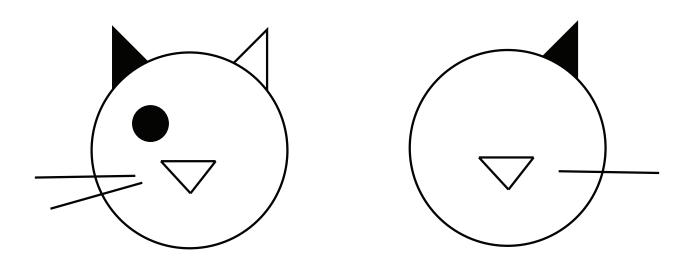
What will happen to the snowman when the air outside starts to get warm?

1. Look at each cat face above, then find its unfinished picture below. Use a pencil to draw in all the missing parts.

2. Circle the cat on the bottom row that has a black nose.
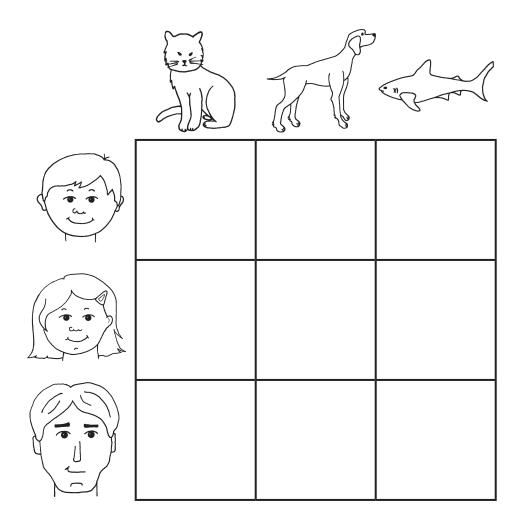
3. Color the cat on the bottom row that has a white nose, using three colors.

ACTIVITY 2

Directions: Fill in the chart using Y for yes or N for no as you solve the puzzle.
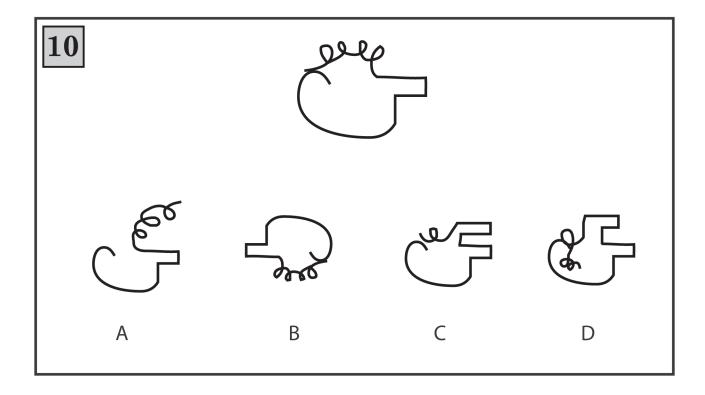
A boy, a girl, and their dad all have their own pets. Use the clues and the chart to find each one's pet.

1. The dad found his pet crying in a tree.
2. The boy's pet sleeps in the boy's bed every night.

FINDING THE CORRECT FIGURE

DIRECTIONS: Match the top figure to one of the bottom figures. The matching figure might be bigger, smaller, darker, turned on its side, flipped, or upside down.

9

Y X
L N P

A   B   C   D

O S   L X G   Y X   Q R
R   2   F Y   L N P   T F
G L   Z

10

A   B   C   D

A look on your face
That says you are glad;
I'm more than a grin
To show you're not sad.

What am I? ....

I slither through the grass
To find some food I like;
My fangs tell all creatures
That I'm ready to strike.
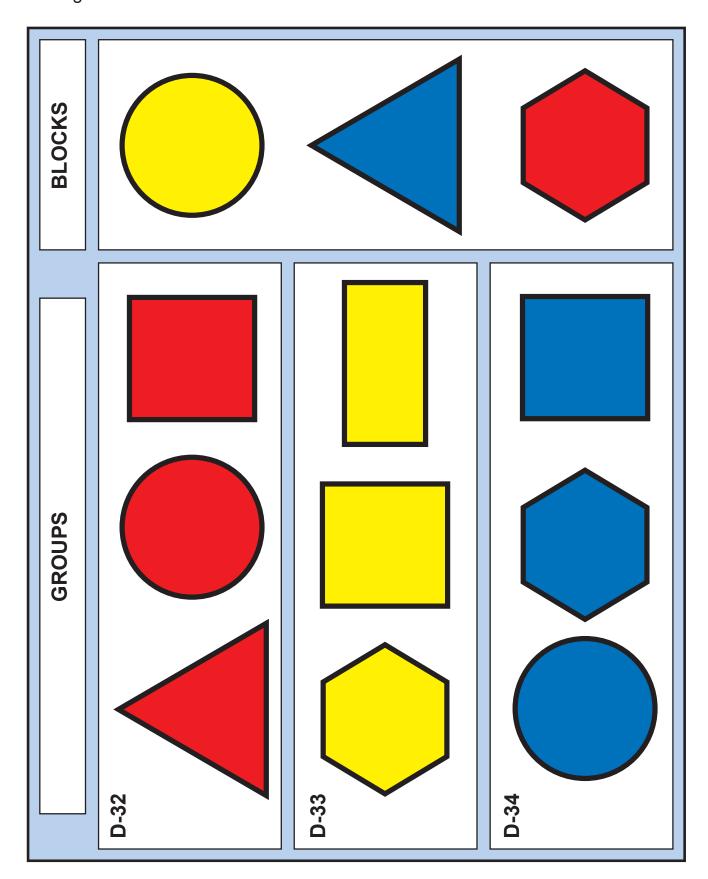
What am I? ....
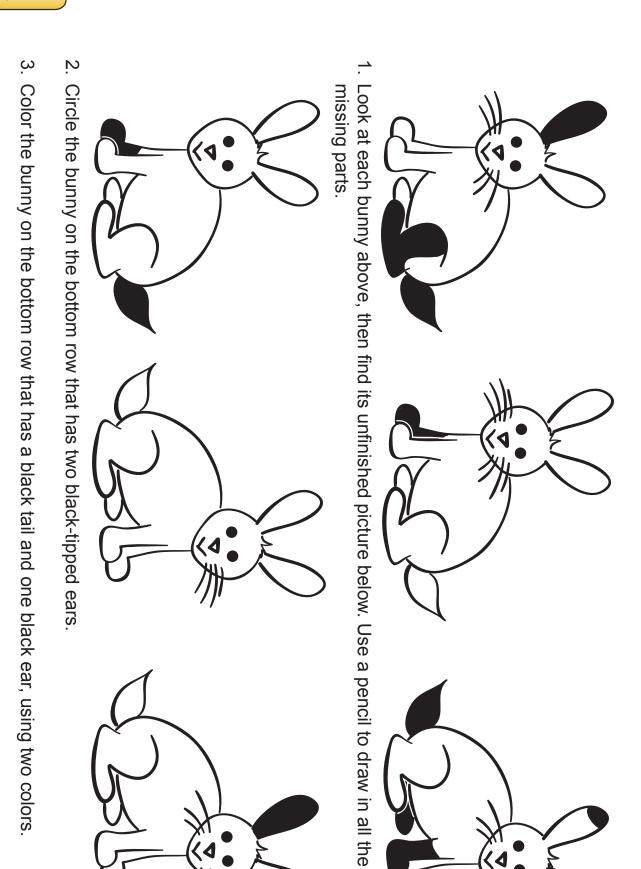
At first a quick sniff,
But, no, I'm not through;
Starts with a tickle
And ends with achoo!

What am I? ....

DESCRIBING A GROUP—WHAT BELONGS?

DIRECTIONS: Draw a line from each block on the right to the group in which it belongs.

BLOCKS

GROUPS

D-32

D-33

D-34

1. Look at each bunny above, then find its unfinished picture below. Use a pencil to draw in all the missing parts.

2. Circle the bunny on the bottom row that has two black-tipped ears.

3. Color the bunny on the bottom row that has a black tail and one black ear, using two colors.
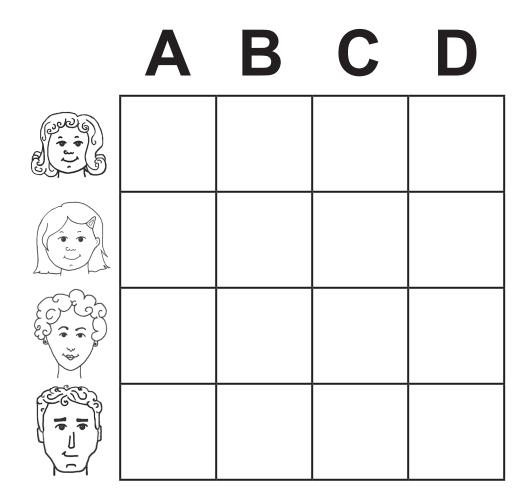
21. Mrs. Baker is Alyssa's mom. Mr. Baker is Alyssa's dad. Tim is Mr. and Mrs. Baker's son.

    a. Can you tell from the story if Tim has a brother?

    b. How is Alyssa related to Tim?

22. No birds have four legs. Barry is a bird.

    a. Is it possible that Barry has four legs?

    b. Is it possible that Barry cannot fly?

23. In Indiana, the corn is at least knee-high by the 4th of July. Suppose today's date is July 5th.

    What follows from this?

ACTIVITY 10

DIRECTIONS: Fill in the chart using Y for yes or N for no as you solve the puzzle.

A   B   C   D
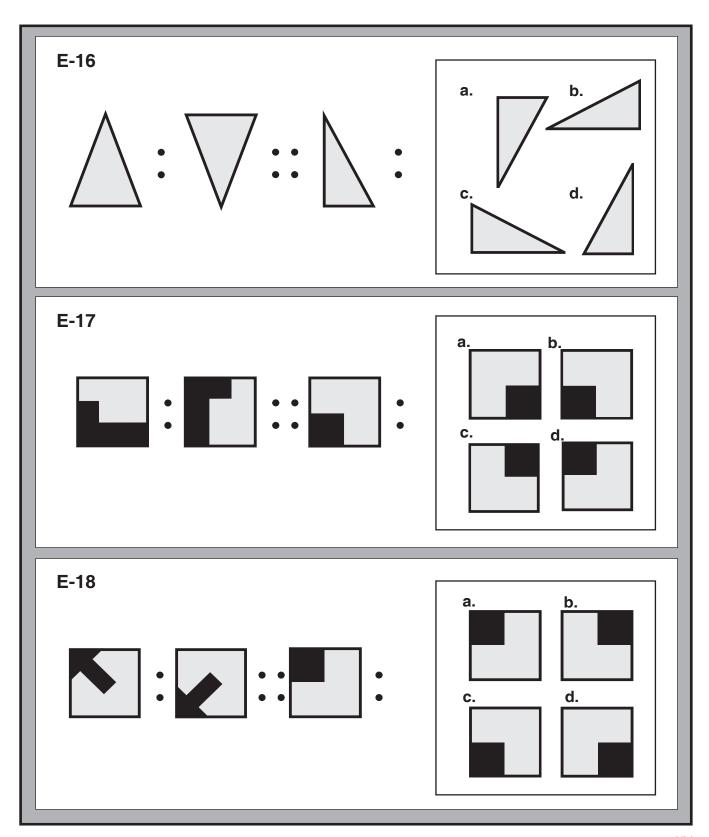
Two girls and their parents make up the Sanchez family. Find the first letter of each person's name.

1. People say Dona gets her curly hair from her father, Carlos.

2. Anita is younger than Bonita but older than Dona.

ANALOGIES WITH SHAPES—SELECT

DIRECTIONS: Circle the figure that completes the analogy.

E-16

a. b. c. d.

E-17

a. b. c. d.

E-18

a. b. c. d.

I have a white shell,
That's easy to crack;
I'm good for breakfast,
Or even a snack.

What am I? ....

For fireplace or patio,
My red blocks will look nice;
The pig who built his house of me,
Sure made that wolf think twice.

What am I? ....

Another word for lad,
I'm younger than a man;
With cow I ride a horse,
With scout I lend a hand.

What am I? ....

Trains

DIRECTIONS: Draw and color or write in the color for the missing pattern blocks in each train.

B = Blue   R = Red   Y = Yellow

Add three more cars to the train, following the same pattern.

1. (B) (B) △B △B □B □B □B □B (Y) ____ ____ ____

2. R Y B R Y B △R △Y ____ ____ ____

3. △Y Y Y Y △Y Y Y Y △B B ____ ____ ____
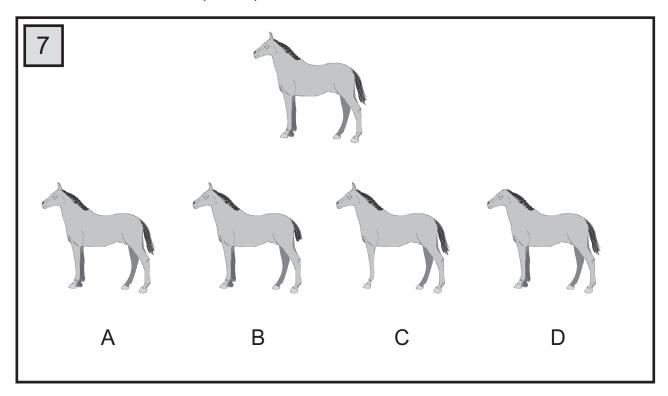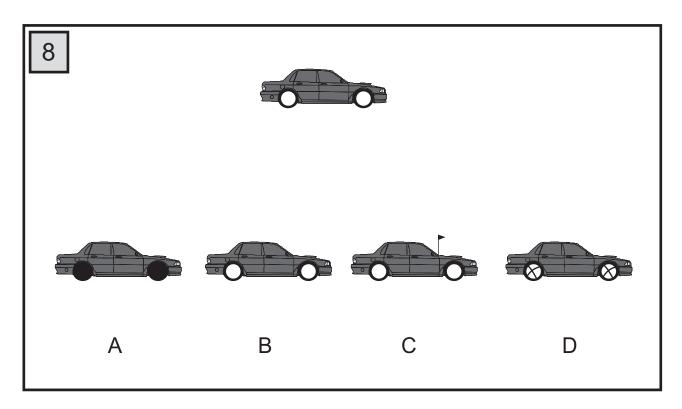
Fill in the blank spaces of the train, following the same pattern.

4. B B R R ___ Y B ___ R R Y Y ___ △B △R △R

FINDING THE MATCHING SHAPE

DIRECTIONS: Match the shape at the top to a form on the bottom row. The match must be the same size, color, and orientation.

7

A   B   C   D

8

A   B   C   D

REARRANGE LETTERS

DIRECTIONS

Use the letters at the top to fill in the chart so that words are formed and the sentence makes sense.

A shaded space in the chart shows the end of a word.

Except for the last line, the end of a line is not the end of a word unless there is a shaded space there.

When you have filled in the chart, answer the question asked.

PROBLEM

27.

H	O	H	M	E	E	C	H	I	I	E	S	F	I	E	E
T	I	R	E	S		T	W	M	S	T	I		M	V	O
T	W		M	U		T			O				T	W	S
			■				■			■					
■						■			■						
■						■					■				

SECRET WORD PUZZLES

9. Use each list of clue words to find a three-letter solution word. Beside each clue word is the number of letters that word has in common with the solution. Write the solution in the blank beneath the column. (The solution is a real word. It is not a person's name. It has no repeating letters.) For more information, see page 40.

a. T O N (0)   b. S A D (0)   c. B E G (0)

   F O X (2)   F O X (2)   F I R (2)

   I T S (1)   A R E (1)   D U E (1)

   F U N (1)   F U N (1)   F I N (1)

   S I X (2)   R O T (2)   R U N (2)

   _____   _____   _____

LINE PUZZLES

25. Use the clues to solve each puzzle. For more information, see page 42.

a. Ron, Betsy, and Jurgen were the only ones waiting in line at a drinking fountain.

1) The boys were not standing next to each other.

2) Jurgen was ahead of Betsy.

Who was last in line? _____

b. Nick Reynaldo; his younger sister, Conchetta Reynaldo; and his friend Ray Wilson were all of different heights.

1) The tallest person was not named Reynaldo.

2) Nick was taller than Conchetta.

Who was the shortest? _____

c. Al, Rick, Karl, and Boris all missed some days of school last week because of illness.

1) Al missed more days than Boris.

2) Karl missed the most number of days.

3) Boris missed more days than Rick did.

Who missed the least number of days? _____

Activity 29

Use the clues and the chart to determine the value of each letter, solve the cryptogram, and discover the famous quote.

	e	h	s	b
10				
8				
5				
2				

10% of 100 = b
6% of 300 = e + b
e − (s + 1) = h
s < h

e = ____
h = ____
s = ____
b = ____

	c	o	u	t
12				
7				
4				
1				

(11% of 400) − t = 32
t ÷ o = u × 3

c = ____
o = ____
u = ____
t = ____

	a	w	r	n
11				
9				
6				
3				

r ≠ 3
n = 44 − 38
r × w ≥ 27
r × w < 28

a = ____
w = ____
r = ____
n = ____

Cryptogram (Parentheses separate double digits; they have no other meaning.)

"(10)8   (12)58   75(11)6g8   y14   3(11)6(12)   (12)1   288   i6 (12)58   319ld."

M(11)5(11)(12)m(11)   G(11)6d5i

"_ _   _ _ _   _ _ _ _ g _   y _ _   _ _ _ _   _ _

_ _ _   i _   _ _ _   _ _ _ ld."

M _ _ _ _ m _   G _ _ d _ i

Activity 3

Use the clues and the chart to determine the value of each letter, solve the cryptogram, and discover the classic joke.

$n - s = f$

$f < 5$

	f	n	s	i
1				
2				
5				
6				
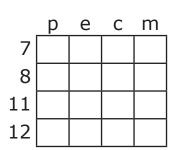
f = ___
n = ___
s = ___
i = ___

$a + t = 12$

$a + h = 19$

	a	t	h	r
3				
4				
9				
10				

a = ___
t = ___
h = ___
r = ___

$p = c + 4$

$m = c + 1$

	p	e	c	m
7				
8				
11				
12				

p = ___
e = ___
c = ___
m = ___

Cryptogram (Parentheses separate double digits; they have no other meaning.)

W(10)93   25   9   14og'5   19vo423(12)   8u527?   (10)2(11)
(10)o(11)!

W_ _ _   _ _   _   _ _ og'_   _ _ vo _ _ _ _

_ u _ _ _?   _ _ _   _ o _!

Boots and Her Kittens

January	2012					
SUN	**MON**	**TUE**	**WED**	**THU**	**FRI**	**SAT**
Happy New Year 1	School starts 2	3	4	5	6	7
8	9	10	Dentist 11	Kittens born 12	13	14
15	Boots goes to vet 16	17	Dog to groomer 18	19	20	21
22	23	24	25	26	27	28
29	Kittens get shots 30	31				

[1]Sarah's cat Boots gave birth to five kittens. [2]Three of the kittens were black with little white paws just like Boots. [3]The other two kittens, however, were white and had blue eyes. [4]Sarah was surprised to see that all the kittens with white paws were male.

Assume all the statements and facts in the puzzle are true. Write whether each sentence is **T**rue, **F**alse, or **U**nknown. Then write the sentence number(s) and/or check the box that provides the best evidence for each true or false answer.
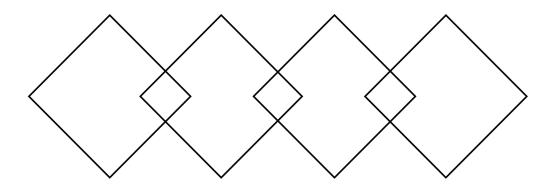
_____ 1. In January 2012 Boots gave birth to kittens at 12:07 a.m.

   _____   ☐   ☐
   Sentence   Picture   Caption

_____ 2. When the kittens were born, three of them looked like Boots.

   _____   ☐   ☐
   Sentence   Picture   Caption

_____ 3. Boots has blue eyes.

   _____ _____   ☐   ☐
   Sentences   Picture   Caption

_____ 4. On June 12th the kittens will be six months old.

   _____   ☐   ☐
   Sentence   Picture   Caption

_____ 5. None of the kittens are female.

   _____ _____ _____   ☐   ☐
   Sentences   Picture   Caption

95. A dozen eggs will make four omelets.
a–c. How many eggs are needed to make
  a. 8 omelets?

  b. 1 omelet?

  c. 9 omelets?

d–f. How many omelets can be made from
  d. 2 dozen eggs?

  e. 9 eggs?

  f. 21 eggs?

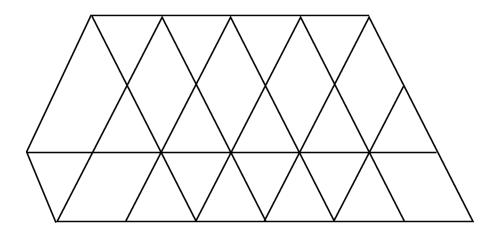**96.** A concrete pipe has an outside diameter of 20 inches. The pipe is 2 inches thick. What is its inside diameter?

DARE
DARE

Figure This! *

1. How many squares can you find in this figure? _____

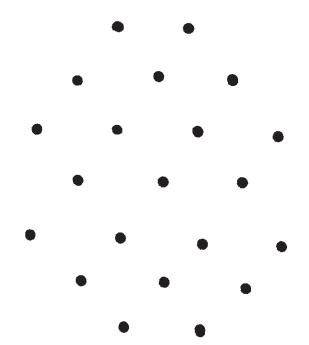**2.** How many triangles can you find in this figure? _____

- 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 more than once to get a sum.
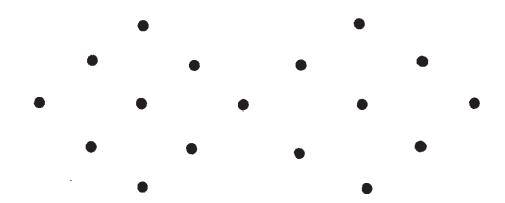
(Three answer digits are given.)

13.

56. You clip a coupon from the newspaper which offers you a $1 refund from the manufacturer if you mail it to them with a label from their product. You buy the product for $3.23 plus 4% sales tax. You mail the coupon and label to the manufacturer at a cost of 15¢ for the stamp and 1¢ for the envelope. The manufacturer sends you a check for $1.

   a. How much did it cost you to send the coupon to the manufacturer?

   b. How much profit did you make from sending the coupon to the manufacturer?

   c. How much sales tax did you pay on the product?

   d. How much (total) did you pay for the product at the store?

   e. What percent of the total you paid was your profit?

   f. How much did the product end up costing you?

   g. What percent of the original sale price (including tax) was your actual cost of the product?

Using only eight lines, see if you can cover the dots below. Here are the rules: do not lift your pencil, trace each line only once, and touch each dot only one time!
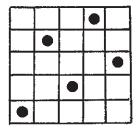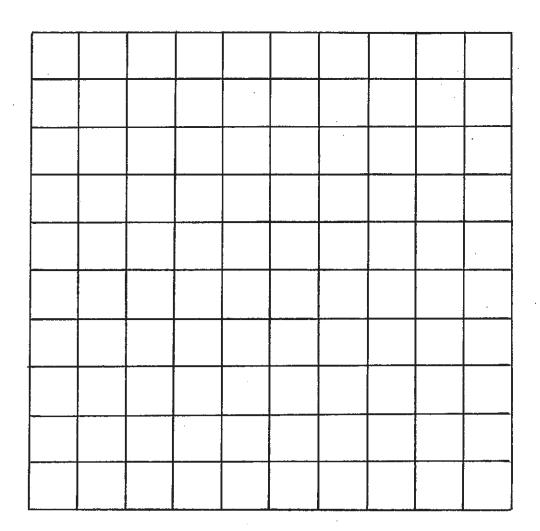
The dots below can be covered using seven and only seven lines. See if you can do it without lifting your pencil, without tracing a line more than once, and without touching a dot more than once.

Place 10 dots in the following 10X10 figure so that
there will be no more than one dot per row,
column, or diagonal.

Example: Place 5 dots in the following 5X5 figure
            so that there will be no more than one
            dot per row, column, or diagonal.

64   THE KONIGSBERG BRIDGE

The city of Konigsberg, in East Prussia, is located on the banks and two islands of the river Pregel. The parts of the city were connected by seven bridges as shown below. Is it possible to walk through all the bridges only once? (You are not allowed to swim, nor may you run or ride!)

A famous mathematician, Leonhard Euler (1707–83), wrote about this puzzle. The city of Konigsberg in the former Soviet Union was later known as Kaliningrad. You might want to see if you can find this city on a map or in an atlas.
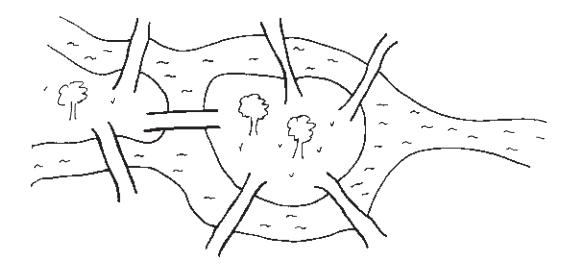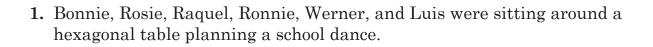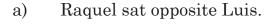
Table Logic

DIRECTIONS: Using the clues given, write the name of each person on the line indicating where they are seated. In the clues, "opposite" means that you can draw a direct line through   the center of the table from one person to another.

1. Bonnie, Rosie, Raquel, Ronnie, Werner, and Luis were sitting around a hexagonal table planning a school dance.

   a)   Raquel sat opposite Luis.
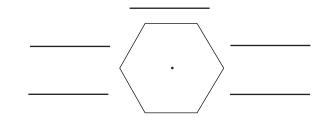
   b)   Bonnie sat opposite Ronnie.

   c)   Werner sat opposite Rosie.

   d)   Ronnie sat to the left of Raquel.

   e)   Rosie sat to the right of Raquel.

   Where did each person sit?

2. Ramon, Chio, Karl, Klaus, Henry, and Li sat around a hexagonal table playing memory games.

   a)   Ramon sat opposite Henry.

   b)   Karl sat opposite Li.

   c)   Karl sat to the left of Ramon.

   d)   Klaus sat to the left of Karl.

   Where did each person sit?

73. Which figure does not belong with the other four?

A.   B.   C.   D.   E.
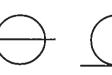
74. Which figure does not belong with the other four?
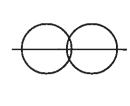
A.   B.   C.   D.   E.

75. In the following series, fill in the question mark with the correct number.

120   60   20   5   1   ?
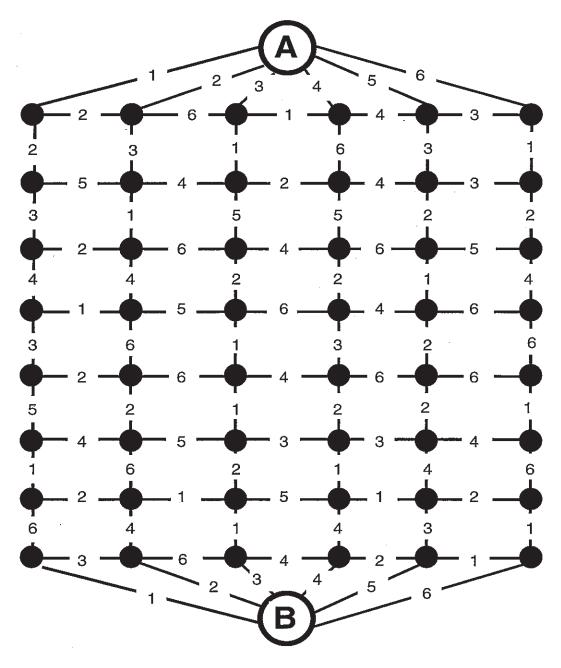
ROAD MAP II

Select 3 highways out of a possible six (1, 2, 3, 4, 5, or 6). Move from City A to City B along only those 3 selected highways. Only one path is correct. (Example: If you decide to travel on highways 1, 2, and 3, then you can move only to those numbers.)

3 highways used = _ _ _

DIRECTIONS

Each problem is given in the form of a chart.

The words for the last two columns are listed (by column, in alphabetical order) below the chart.

Each line of the chart is a small problem by itself.

For each line, read the first two words and decide how they are related. Then find a third and fourth word (from the bottom) that are related in the same way.

origin	destination		
expand	grow		
help	meddle		
professional	amateur		
quiet	noisy		

Column 3: assist, contract, reserved, start, veteran

Column 4: beginner, end, exuberant, interfere, shrink

CROLOSTWD

Weighing Problem

Problem

137. You have six balls, all of which look exactly the same.

Five of them weigh the same, but the sixth one is slightly lighter or heavier.

You have a balance scale. How can you find the odd ball in at most three weighings?

TELEPHONE CODE PUZZLES

14. Use the telephone buttons to decode the words in each category. For more information, see page 42.

AMERICAN PRESIDENTS

	ABC	DEF
1	2	3
GHI	JKL	MNO
4	5	6
PRS	TUV	WXY
7	8	9

a. 2 8 7 4   BUSH _____

b. 4 6 6 8 3 7 _____

c. 8 7 8 6 2 6 _____

d. 7 3 2 4 2 6 _____

e. 5 4 6 2 6 5 6 _____

f. 7 6 6 7 3 8 3 5 8 _____

AMERICAN STATES

g. 4 6 9 2 _____

h. 6 2 4 6 3 _____

i. 5 2 6 7 2 7 _____

j. 4 3 6 7 4 4 2 _____

k. 4 5 5 4 6 6 4 7 _____
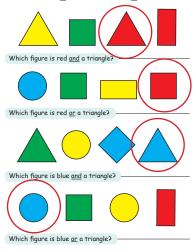
l. 2 6 6 6 3 2 8 4 2 8 8 _____

Answers

Can You Find Me? PreK (p. 1)
Mary, pink; Lou, blue; John, yellow

Building Thinking Skills® Beginning (p. 2)

Which figure is red and a triangle?

Which figure is red or a triangle?

Which figure is blue and a triangle?

Which figure is blue or a triangle?

Building Thinking Skills® Beginning (p. 3)

Which picture happened first?
Which picture happened next?
Which picture happened last?

What will happen to the snowman when the air outside starts to get warm?

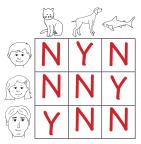The snowman will start to melt.

Thinker Doodles Beginning (p. 4)

1. Look at each cat face above, then find its unfinished picture below. Use a pencil to draw in all the missing parts.
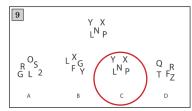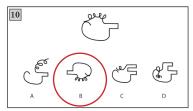
2. Circle the cat on the bottom row that has a black nose.

3. Color the cat on the bottom row that has a white nose, using three colors.

Mind Benders® Level 1 (p. 5)

Visual Perceptual Skill Building® Book 1 (p. 6)

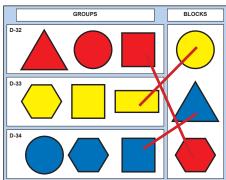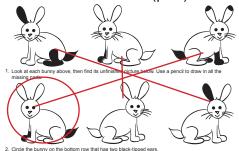## Dr. DooRiddles A2 (p. 7)
smile
snake, rattlesnake
sneeze

Building Thinking Skills® Primary (p. 8)

Thinker Doodles A1 (p. 9)

1. Look at each bunny above, then find its unfinished picture below. Use a pencil to draw in all the missing parts.

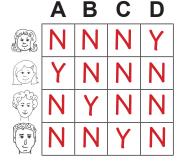2. Circle the bunny on the bottom row that has two black-tipped ears.

3. Color the bunny on the bottom row that has a black tail and one black ear, using two colors.

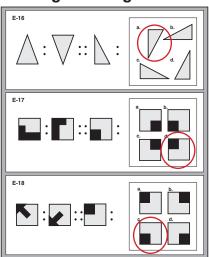## Mind Benders® Verbal (p. 10)

21. a. No
    b. Alyssa is Tim's sister.
22. a. No
    b. Yes, Barry could be a baby bird, an ostrich, or a bird with a broken wing.
23. The corn in Indiana is at least knee-high.

Mind Benders® Level 2 (p. 11)

	A	B	C	D
	N	N	N	Y
	Y	N	N	N
	N	Y	N	N
	N	N	Y	N

Building Thinking Skills® Level 1 (p. 12)

Dr. DooRiddles A3 (p. 13)

egg
brick (s)
boy

Think A Minutes A1 (p. 14)

Trains

DIRECTIONS: Draw and color or write in the color for the missing pattern blocks in each train.

B = Blue   R = Red   Y = Yellow

Add three more cars to the train, following the same pattern.

Fill in the blank spaces of the train, following the same pattern.
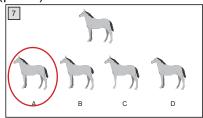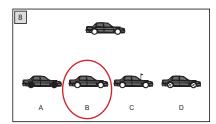

Visual Perceptual Skill Building® Book 2 (p. 15)

Cranium Crackers Book 1 (p. 16)

How much is five times two times three times two? (60)

Dr. Funster's Creative Thinking Puzzlers A1 (p. 17)

a. FIX
b. FOR
c. FUR

Dr. Funster's Creative Thinking Puzzlers A1
(p. 18)
a. Ron
b. Conchetta
c. Rick

Crypto Mind Benders® Famous Quotations
(p. 19)
"Be the change you want to see in the world."
-Mahatma Gandhi

	e	h	s	b
10	−	−	−	+
8	+	−	−	−
5	−	+	−	−
2	−	−	+	−

Answers: e = 8; h = 5; s = 2; b = 10
If 10 percent of 100 equals *b*, *b* must be 10.
Six percent of 300 equals *e* plus *b*; therefore,
e must be 8 for the equation to be true. If *e*
minus *s* plus 1 equals *h*, and *s* is greater than *h*,
s must be 2, and *h* must be 5 for the equation
to be true.

	c	o	u	t
12	−	−	−	+
7	+	−	−	−
4	−	−	+	−
1	−	+	−	−

Answers: c = 7; o = 1; u = 4; t = 12
If 11 percent of 400 minus *t* equals 32, *t* must
be 12 for the equation to be true. If *t* divided
by *o* equals *u* times 3, *o* must be 1, and *u* must
be 4 for the equation to be true. *c* is then 7.

	a	w	r	n
11	+	−	−	−
9	−	−	+	−
6	−	−	−	+
3	−	+	−	−

Answers: a = 11; w = 3; r = 9; n = 6
n equals 44 minus 38; therefore, *n* is 6. If *r*
times *w* is greater than or equal to 27, but less
than 28, *r* times *w* must be 27; therefore, *r*
and *w* must be either 3 or 9 for the equation to
be true, and since *r* is not 3, *r* must be 9, and
w must be 3. *a* is then 11.

Crypto Mind Benders® Classic Jokes (p. 20)
What is a frog's favorite music? -Hip hop!

	f	n	s	i
1	+	−	−	−
2	−	−	−	+
5	−	−	+	−
6	−	+	−	−

Answers: f = 1; n = 6; s = 5; i = 2
If *n* minus *s* equals *f*, and *f* is less than 5, then *n*
must be 6, *s* must be 5, and *f* must be 1 for the
equation to be true. *i* is then 2.

	a	t	h	r
3	−	+	−	−
4	−	−	−	+
9	+	−	−	−
10	−	−	+	−

Answers: a= 9; t = 3; h = 10; r = 4
If *a* plus *t* equals 12, then *a* and *t* must be
either 3 or 9 for the equation to be true. If *a*
plus *h* equals 19, *a* and *h* must be either 9 or 10
for the equation to be true; therefore, *a* must
be 9, the only number used in both equations.
Therefore, *t* must be 3, and *h* must be 10. *r* is
then 4.

	p	e	c	m
7	−	−	+	−
8	−	−	−	+
11	+	−	−	−
12	−	+	−	−

Answers: p = 11; e = 12; c = 7; m = 8
If *p* equals *c* plus 4, and *m* equals *c* plus 1, *p*
must be 11, *c* must be 7, and *m* must be 8 for
the equations to be true. *e* is then 12.

Smarty Pants Puzzles™ Level 1 (p. 21)
1. U; There is not enough evidence. While
   Boots gave birth to kittens in January 2012,
   we do not know what time this occurred.
2. T; 2; Three of the kittens had black fur with
   white paws "just like Boots." This means
   that Boots also had black fur with white
   paws.
   Thus, the kittens looked like Boots. Note
   that the statement does not say that the
   kittens looked exactly like Boots, meaning
   identical in every aspect.
3. U; There is not enough evidence. We are
   not told the color of Boots's eyes. Just
   because two of the kittens have blue eyes
   does not mean that Boots also has blue
   eyes.
4. F; picture; The kittens were born on
   January 12th. June 12th occurs five

months later. So the kittens would be five months old on June12th, not six months old.

5. T; 2, 3, 4; All of the kittens are male. We are told that all the kittens with white paws are male (sentence 4), and since all the kittens have white paws (sentences 2 and 3), all the kittens must be male.

Math Word Problems Book 1 (p. 22)
95. a. 2 dozen
    b. 3
    c. 27
    d. 8
    e. 3
    f. 7
96. 16 inches

Think-A-Grams A1 (p. 23)
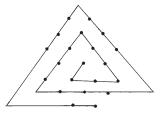Double Dare

Think A Minutes B1 (p. 24)
1. 7
2. 36

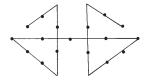## CrossNumber Math Puzzles C1 (p. 25)
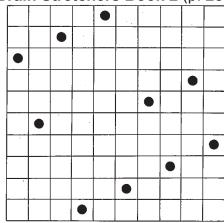

Math Word Problems Book 2 (p. 26)
56. $36,144.75

Brain Stretchers Book 1 (p. 27)

Brain Stretchers Book 2 (p. 28)

Math Ties B1 (p. 29)
Unless you swim the channel or jump (instead of walk) across bridges, etc., there is no solution.

Think A Minutes C2 (p. 30)
(Note that you are correct if you show the arrangements rotated but in the same relative positions.)

1.

2.

Brain Stretchers Book 3 (p. 31)

73. E

In each of the other figures, there is one line fewer in the middle than the number of sides the figure has. E has 5 lines and 5 sides.
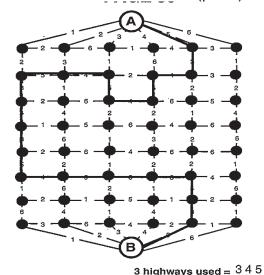
74. B

If just one circle appears in a figure, the line touches the circle only at the outer edge of the circle. If two interlocking circles appear in a figure, the line runs all the way through the figure. B has one circle with a line running through it instead of touching just the outer edge of the circle.

75. 1/6

The series progresses like this:
1/2 of 120 is 60
1/3 of 60 is 20
1/4 of 20 is 5
1/5 of 5 is 1
and the next would be
1/6 of 1, which is 1/6.

Brain Stretchers Book 4 (p. 32)

3 highways used = 3 4 5

Cranium Crackers Book 3 (p. 33)
start, end / contract, shrink / assist, interfere / veteran, beginner / reserved, exuberant

Think-A-Grams B1 (p. 34)
Lost in the crowd

Cranium Crackers Book 4 (p. 35)
Put two balls in each pan. The scales either (1) balance or (2) don't balance.

Suppose (1). Remove three of the four balls weighed and put one of the two unweighed balls in the empty pan. If the scales balance, the odd ball is the sixth ball. If they don't 200 balance, the odd ball is the one that was added.

Suppose (2). Then the odd ball is one of the four weighed. Remove the two balls from one of the pans and lay them aside. Transfer a ball from the other pan to the empty pan. Either the scales now (3) balance or (4) don't balance.

Suppose (3). Then the odd ball is one of the two removed. See "Final Weighing" below.

Suppose (4). Then the odd ball is one of the two not removed. See "Final Weighing" below.

Final Weighing: The odd ball is known to be one of two particular balls. Put one of these in one pan, and put one of the other four balls (known to be of normal weight) in the other pan. If the scale balances, the odd ball is the one (of the two suspects) not weighed this time. If the scale doesn't balance, the odd ball is the one (of the two suspects) weighed this time.

Dr. Funster's Creative Thinking Puzzlers C1 (p. 36)
(a) Bush, (b) Hoover, (c) Truman, (d) Reagan,
(e) Lincoln, (f) Roosevelt ,
(g) Iowa, (h) Maine, (i) Kansas,
(j) Georgia, (k) Illinois, (l) Connecticut