Max the Magician
Extension Activities

Activity Name/Number	Point Value
Tangram Puzzles: (Shape template on AIG web page)	
1. Tangram Puzzles – online http://www.abcya.com/tangrams.htm	10 points for each puzzle
2. Tangram puzzles – print and play "Seven Magic Shapes"	10 points for each puzzle
3. A Friend for Max – (tangrams)	10 points
4. A Present for Max	10 points
5. A Tangram Bird	10 points
6. A Magic Hat	10 points
Max the Magician:	
7. Rabbit Reversal	5 points
8. Designer Details	5 points
9. Max's Hat Tricks	15 points
10. Make Max Reappear	15 points
11. Hat Strings	5-15 points (depending on complexity of pattern created)
Pattern Block Puzzles:	
12. Hefty Hexagon	10 points
13. Which is bigger?	15 points
14. Symmetry with Pattern Blocks #2	15 points
15. Symmetry with Pattern Blocks #3	20 points
16. Pattern Puzzlers	15 points

17. What's it worth?	25 points
18. All the Colors	25 points
19. Arrowhead	25 points
20. Blockasaurus	10 points
21. Six times over	25 points
22. Shapes and Logic	20 points
23. What the Hex?	5 points per game
Other puzzles, problems, and games	
24. How Many Squares?	15 points
25. How many Triangles?	15 points
26. Bunches of Buttons & Fishy Features	5 points each

Max the Magician

. . . Looks for

patterns

. . . To find

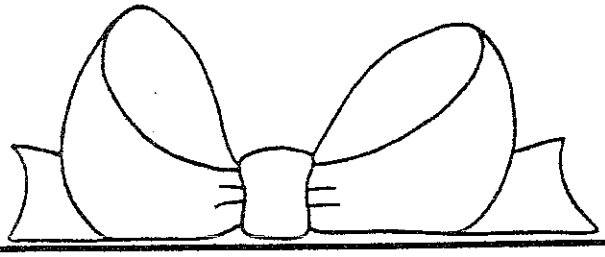
one solution

that works

#3
10 points

A Friend for Max

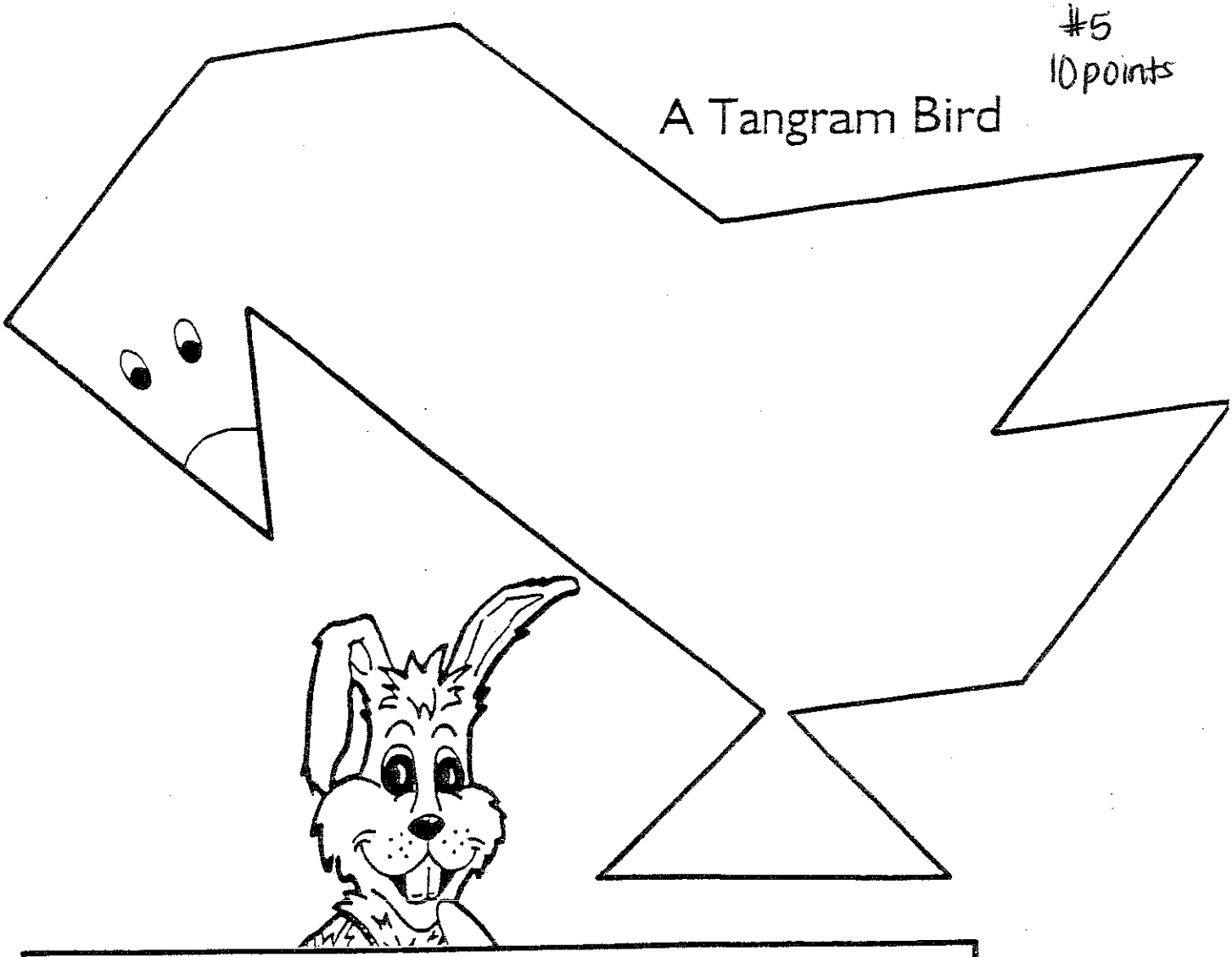
A Present for Max



#4 - 10 points

#5
10 points

A Tangram Bird



A Magic Hat

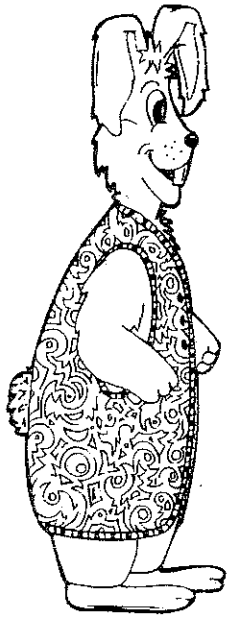
#6 - 10 points

#7
5 points

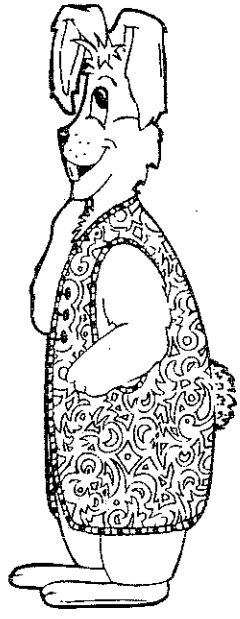
Rabbit Reversal

Which rabbit below is the real Max?

Which of Max's pictures below is the same as the Max in the box — **but turned in a different direction?**



1



5

2

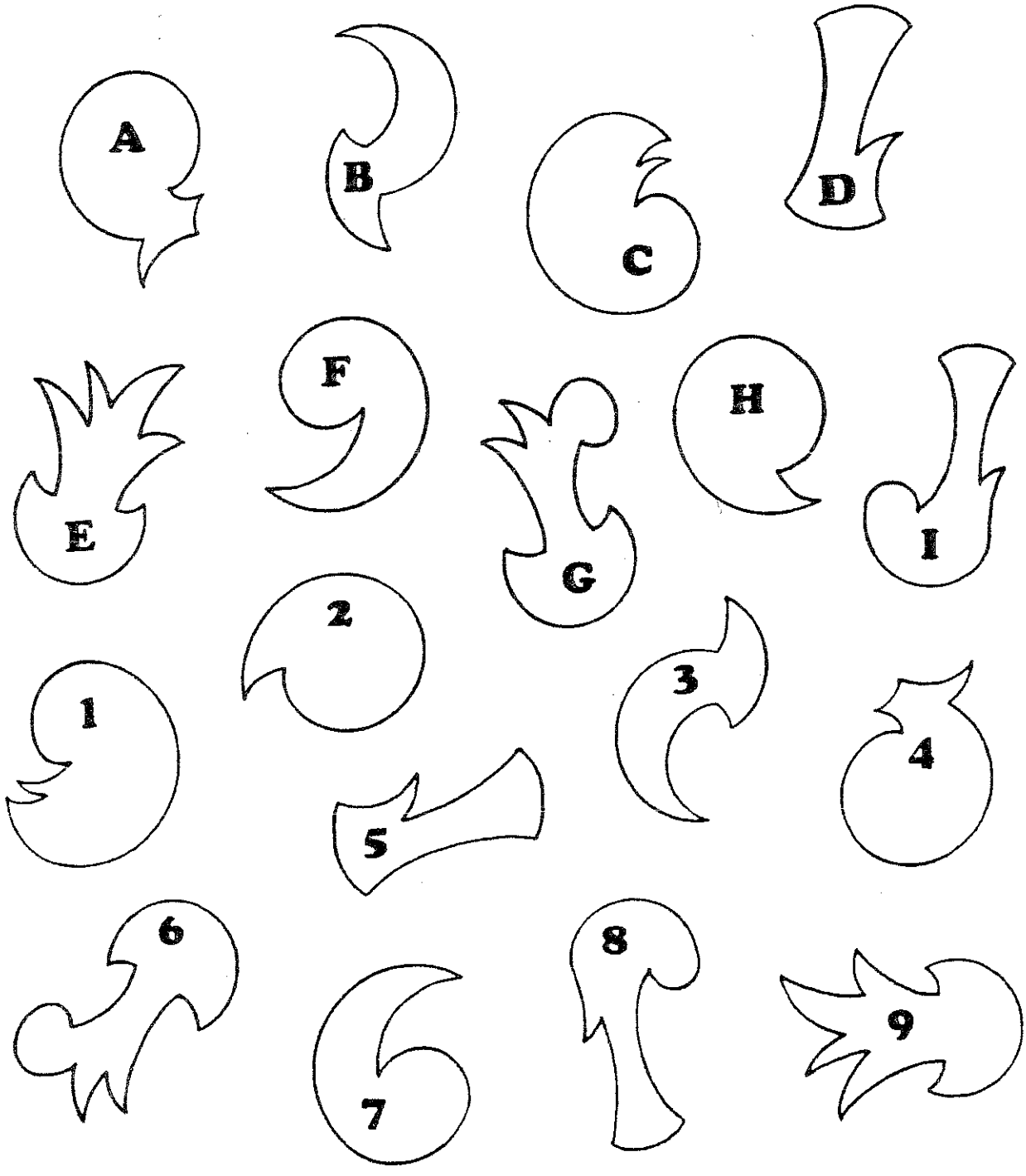
3

4

#8
5 points

Designer Details

These designs are from Max's vest. Match each design with a letter to an identical shape with a number. Write the correct letter in each numbered shape.

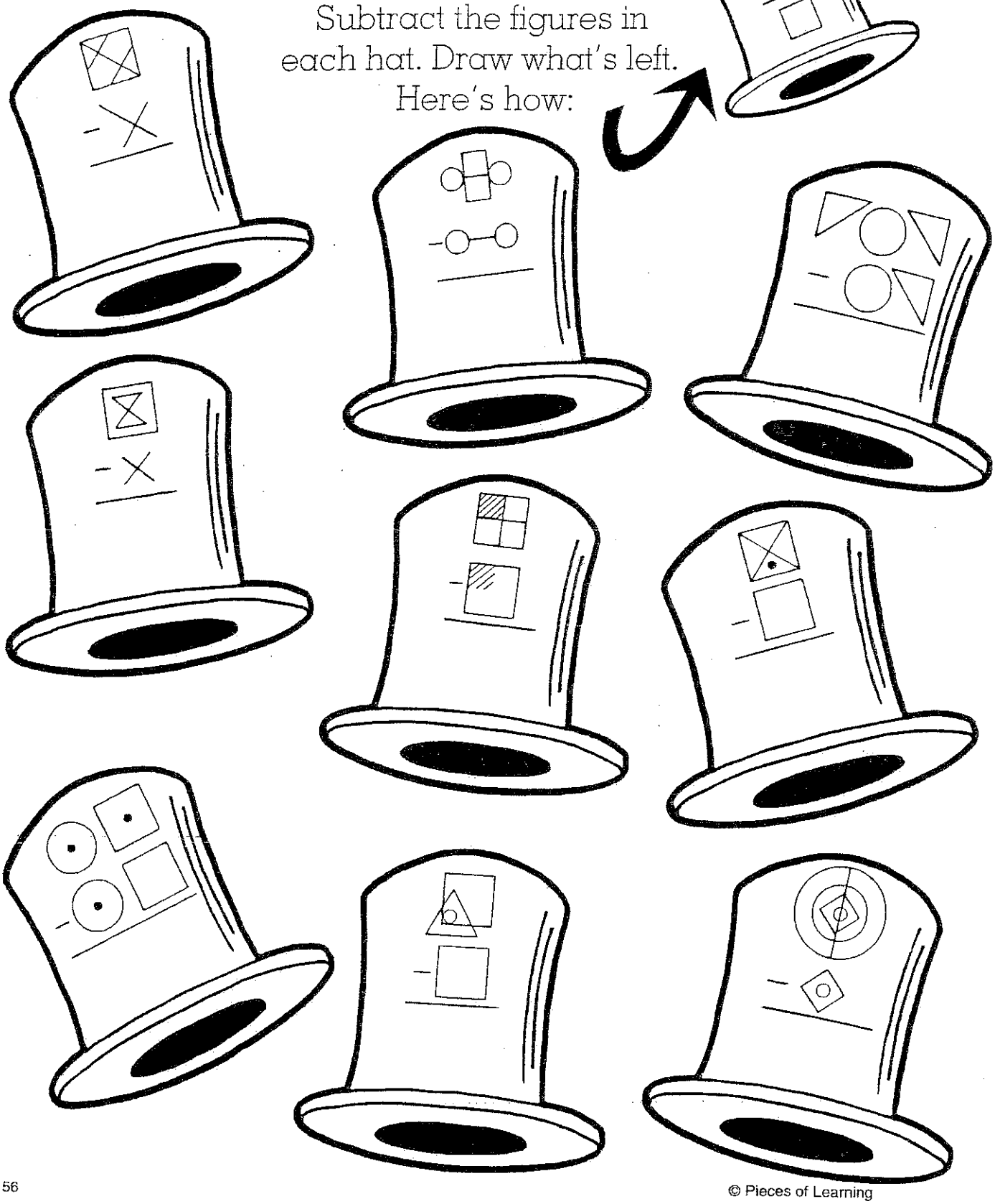


#9
15 points

Name _____

Max's Hat Tricks

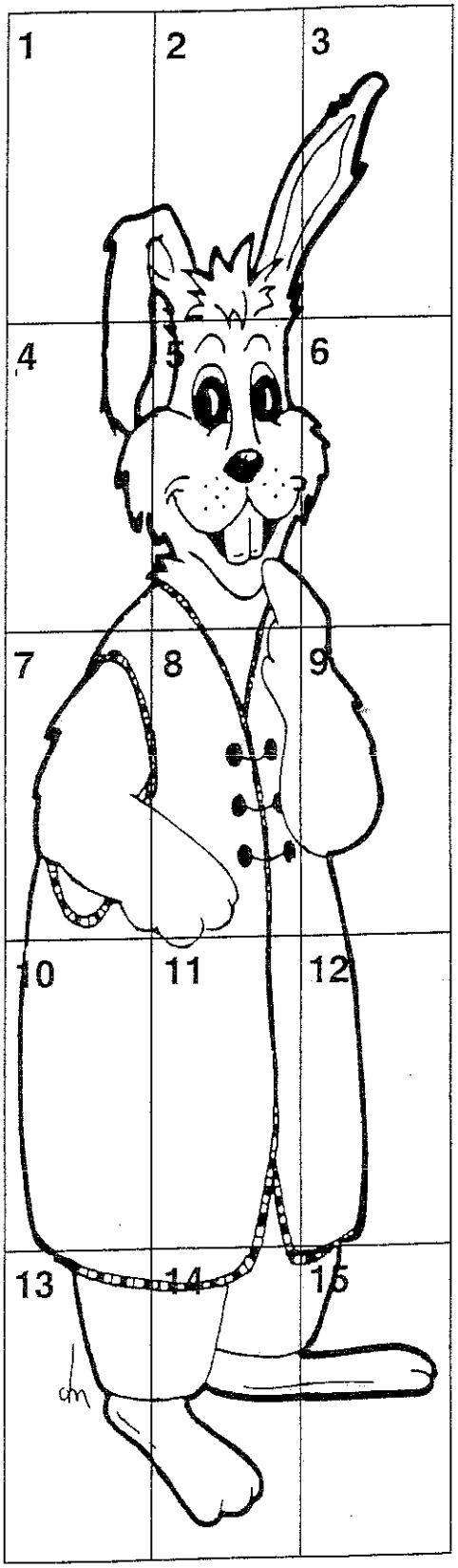
Subtract the figures in each hat. Draw what's left. Here's how:



#10
15 points

Name _____

Make Max Reappear



1	2	3
4	5	6
7	8	9
10	11	12
13	14	15

Name _____

#11

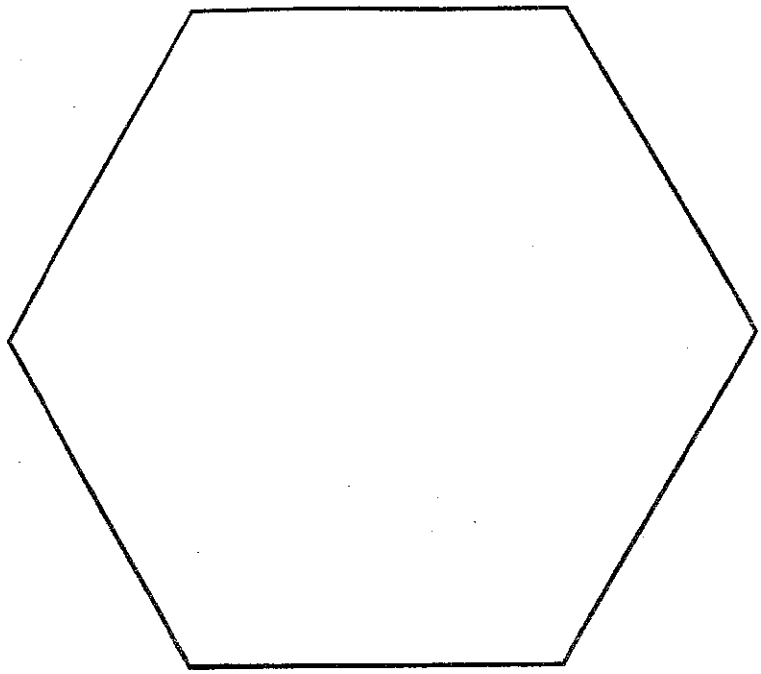
Hat Strings

Create a pattern using these hats.

#12
10 points

Hefty Hexagon

Find as many ways as you can to fill the big hexagon.



Record the blocks you use each time.
Your chart could look like this.

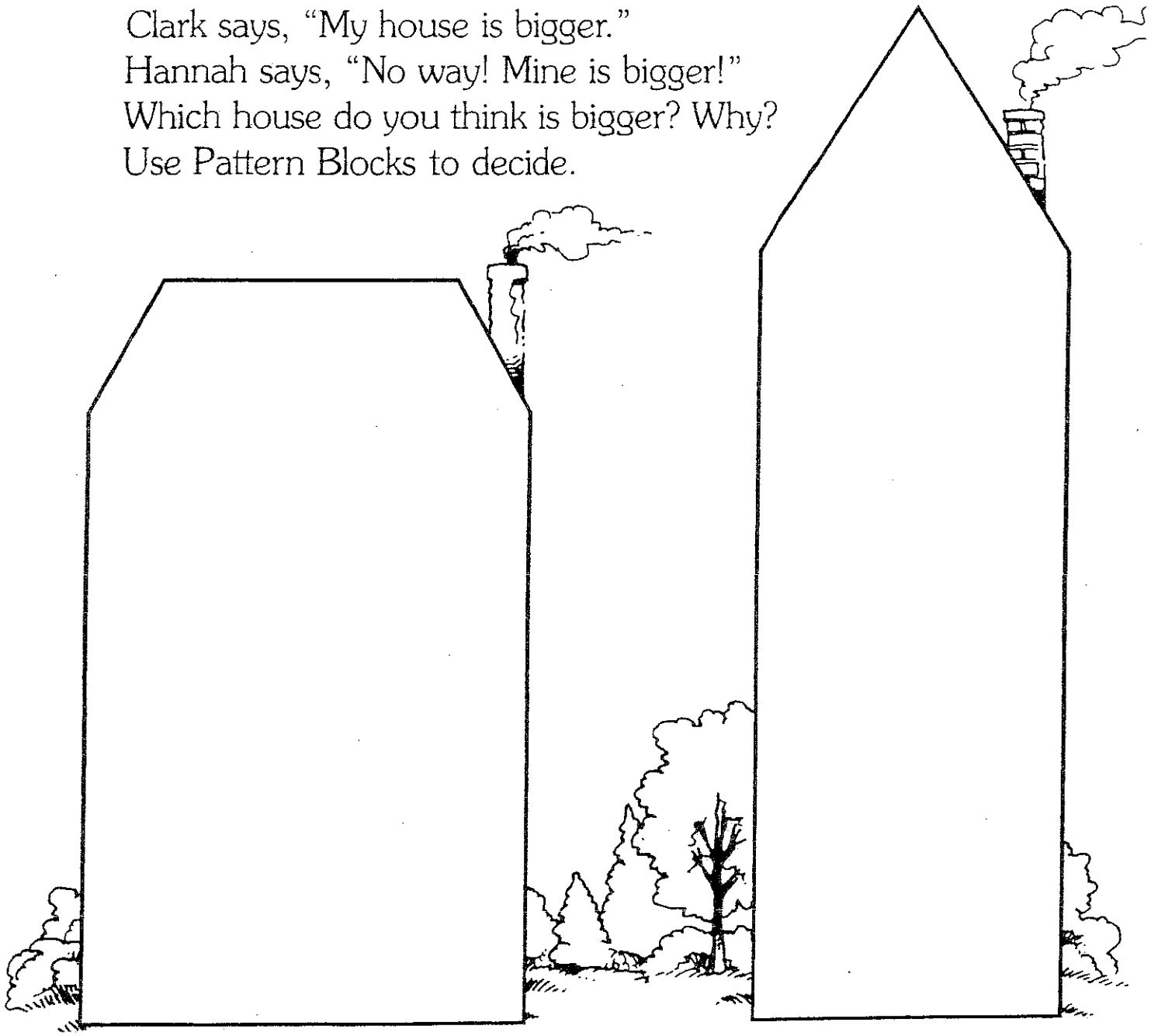
	△	▱	⏢	⬡
# 1				
# 2				
# 3				
# 4				

➤ Describe any patterns you notice.

Which Is Bigger?

#15
15 points

Clark says, "My house is bigger."
Hannah says, "No way! Mine is bigger!"
Which house do you think is bigger? Why?
Use Pattern Blocks to decide.



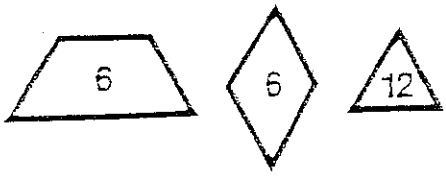
Hannah's House

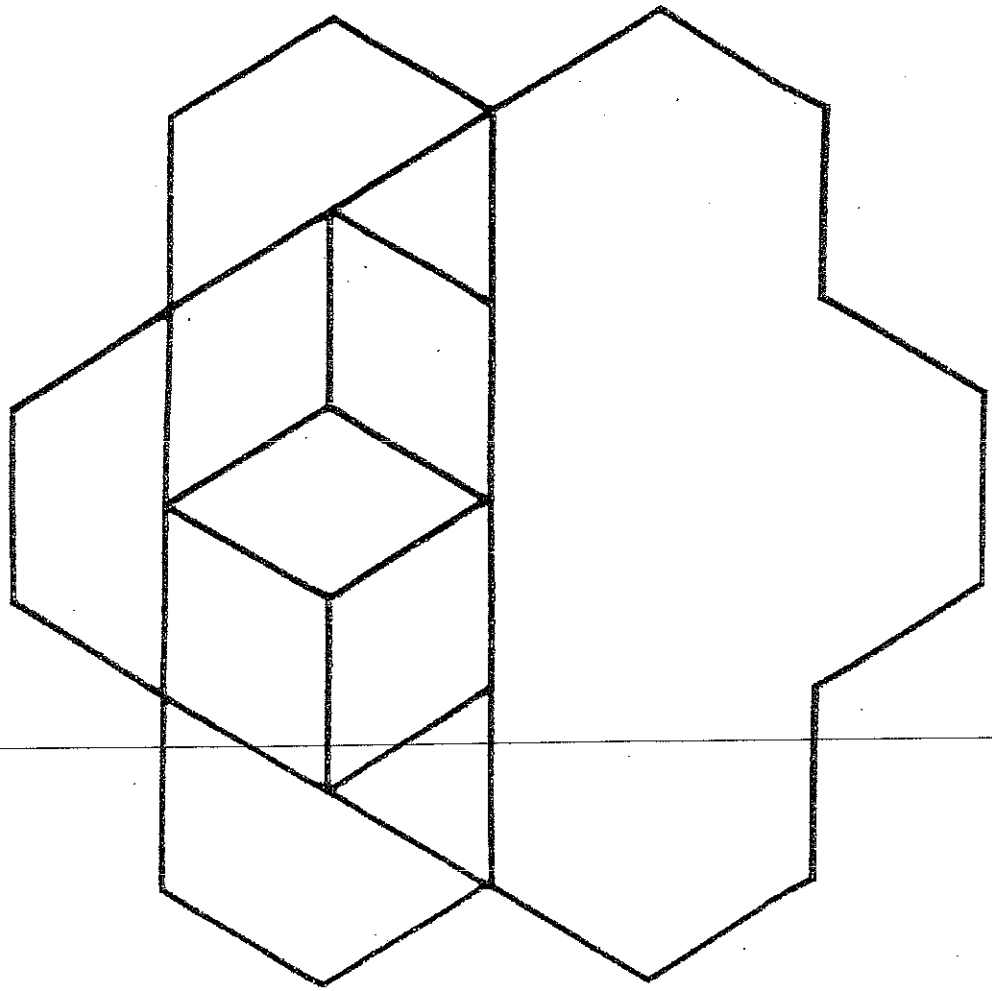
Clark's House

Write to Hannah and Clark.
Tell what you did and what you found out.

SYMMETRY WITH PATTERN BLOCKS

#14
15 points (2)

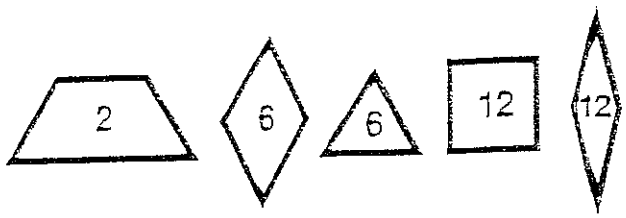


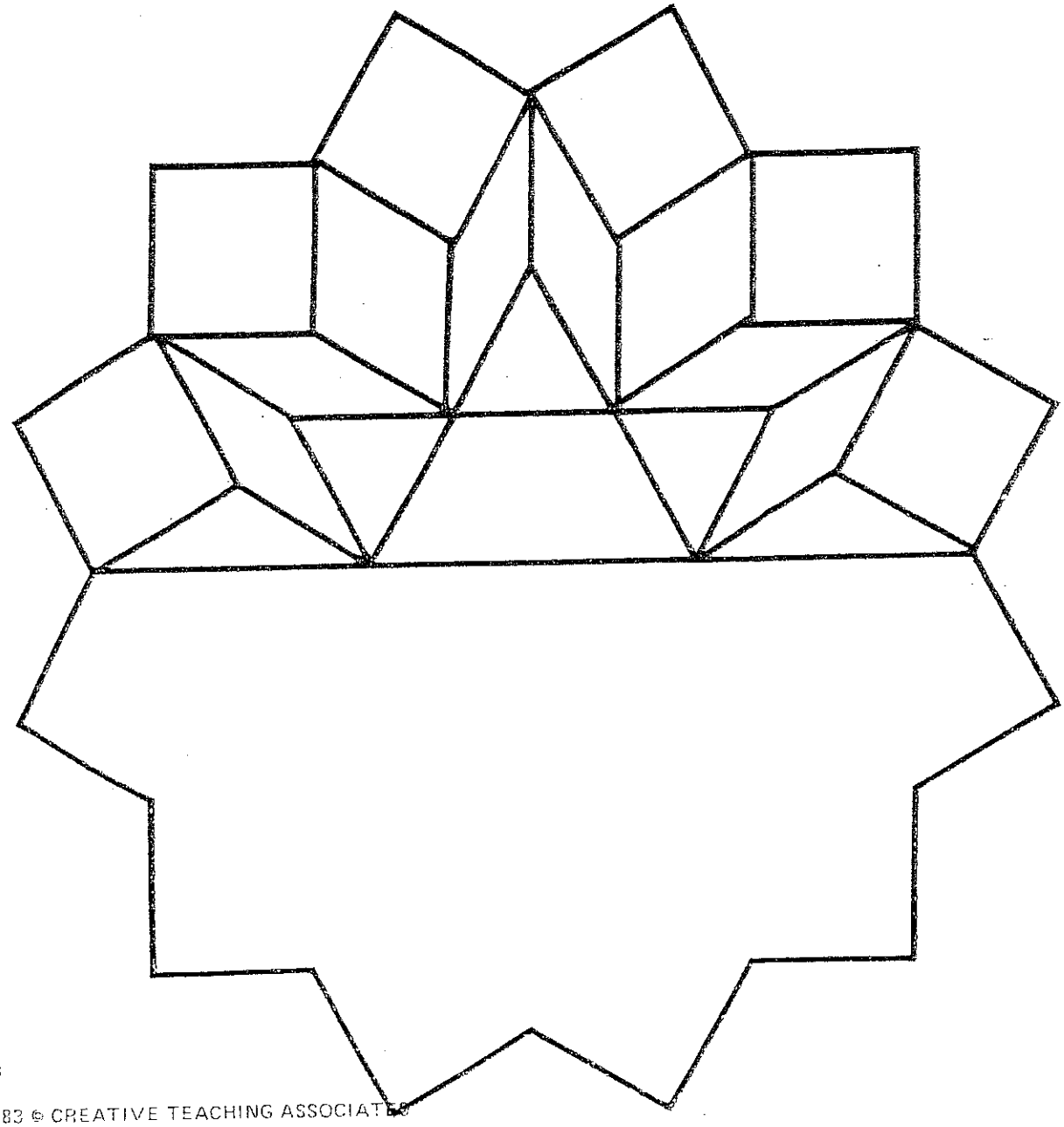


Berrin

SYMMETRY WITH PATTERN BLOCKS

#15
20 points (3)





#16
15 points

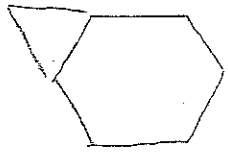
PATTERN PUZZLERS

Directions: use tiles 0-9 to make the statements below true.

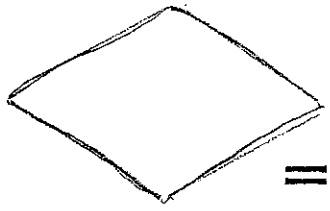
If . . .

= 18

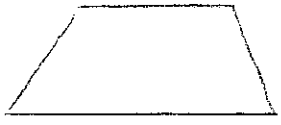
Then . . .

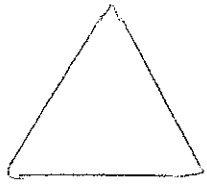


= 12



= 10

5  = 10

□  = 10

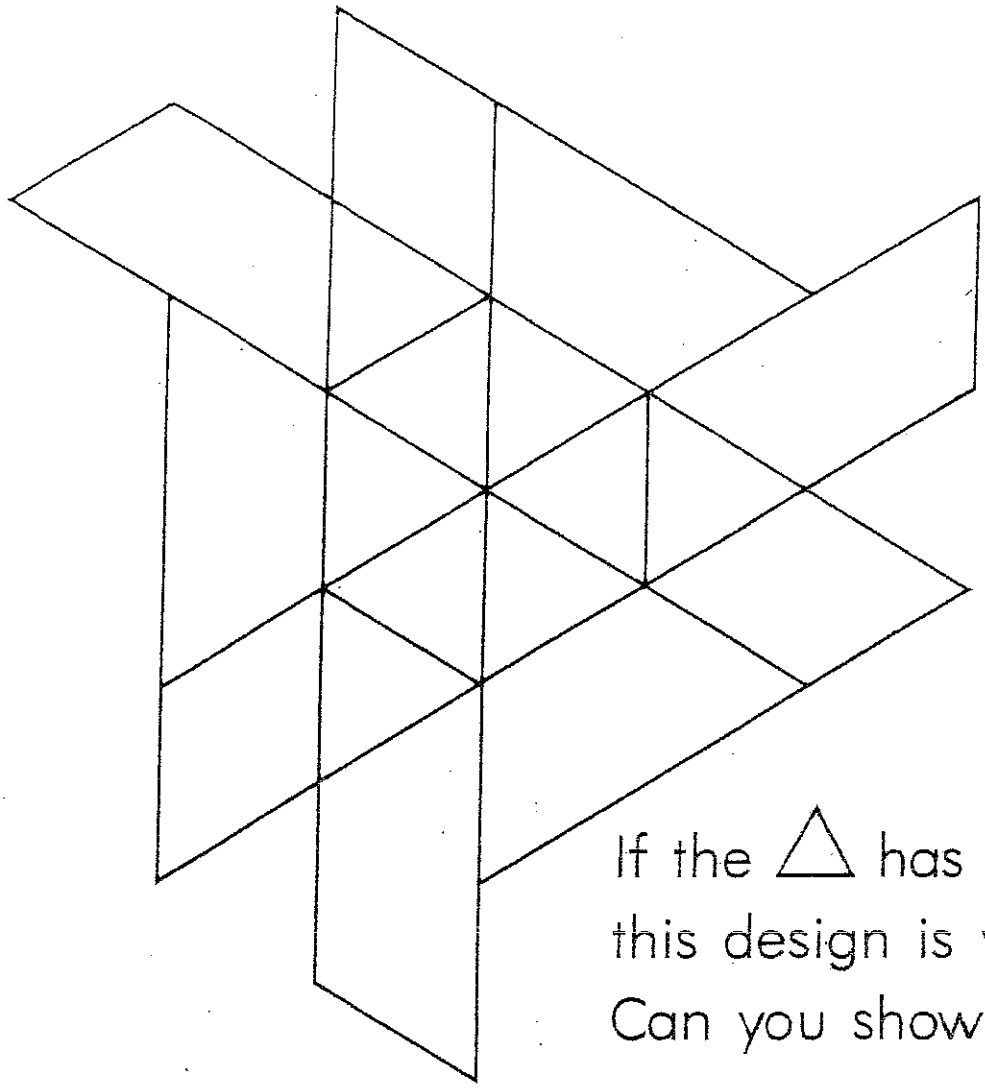
 = □ + 1□ + 3

 = □

What's It Worth?

**

#17
25 points



If the △ has a value of 1, this design is worth 33. Can you show why?

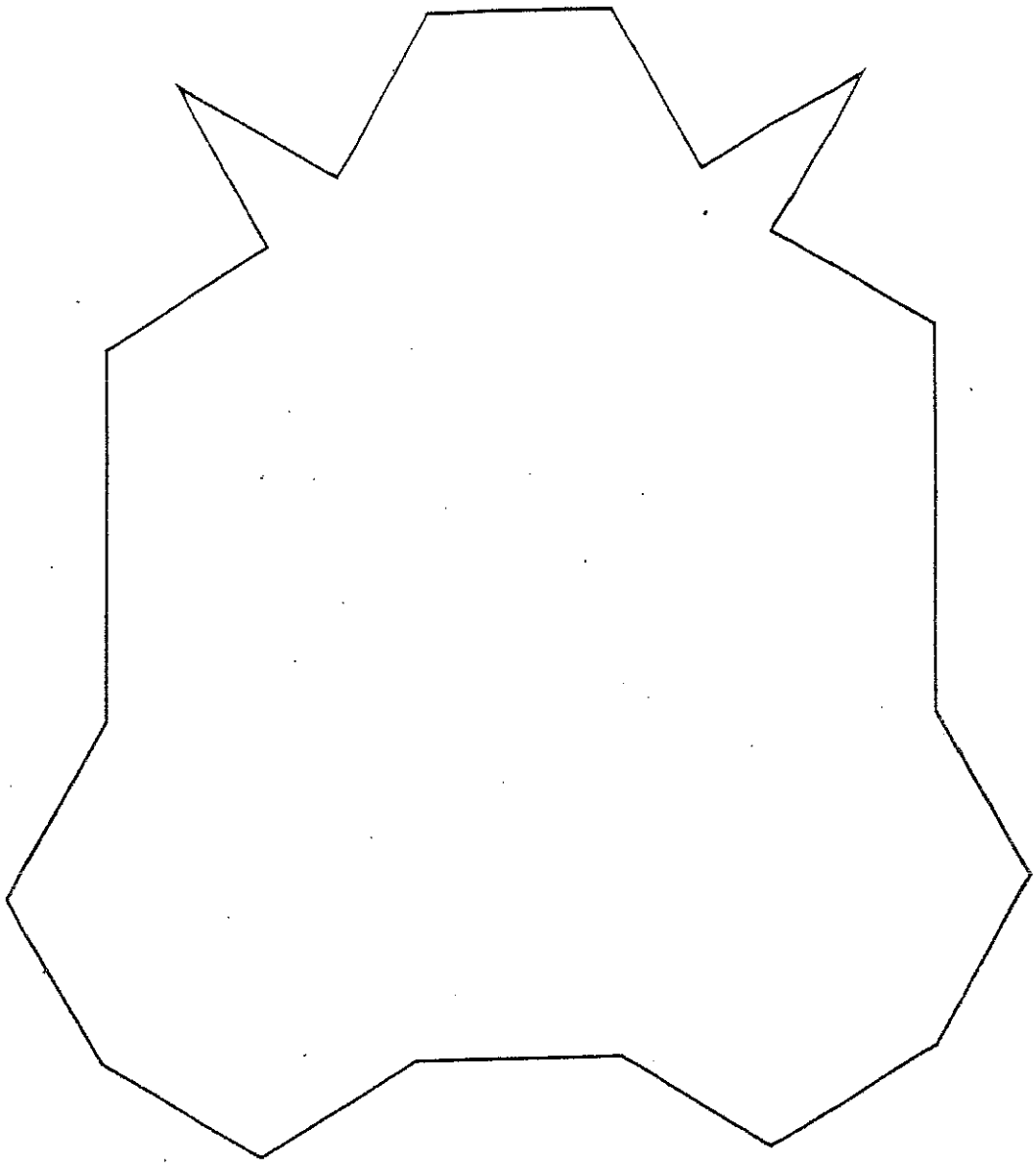
Build your own design with 18 blocks.

Use only ⬡, ⏢, ▱, and △.

If the △ has a value of 1, how much is your design worth?

If the △ has a value of 5, how much is your design worth?

All the Colors



#18
25 points

Can you solve this problem?
Follow the rules to fill in this shape.

RULES:

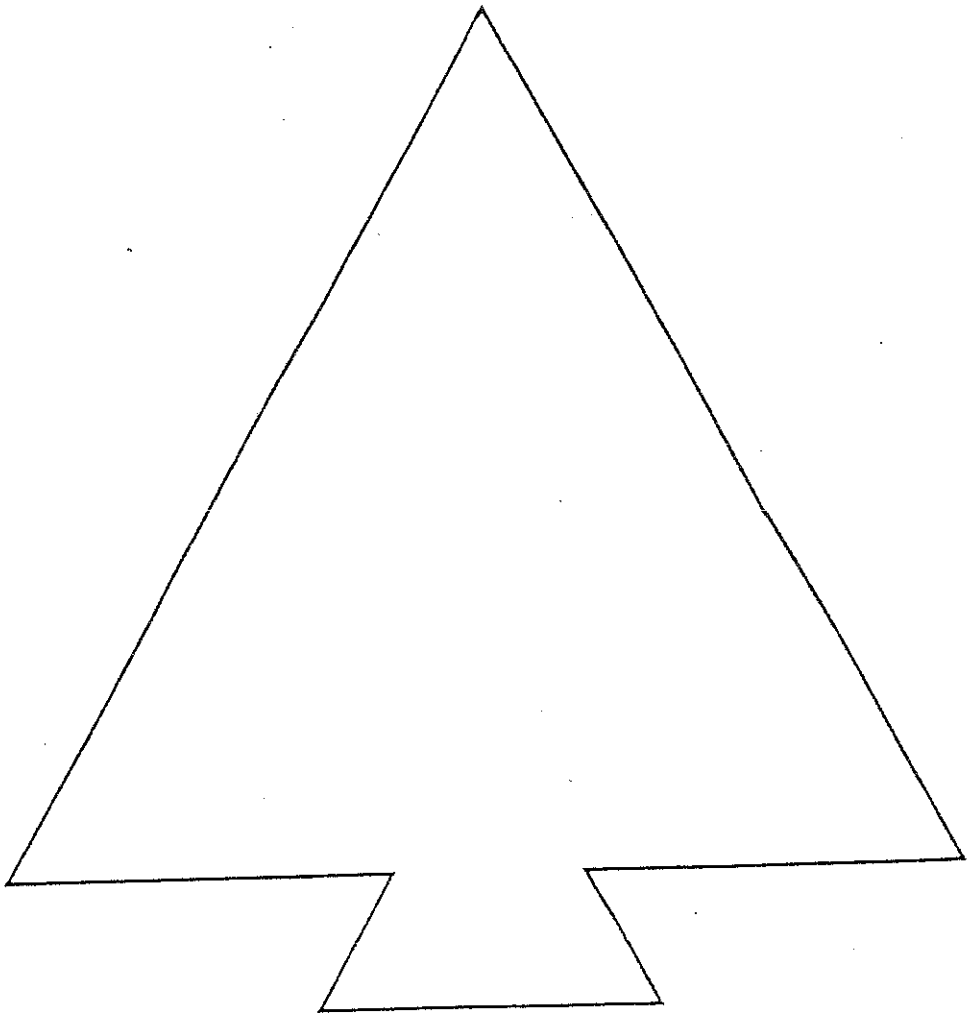
1. Use 24 pattern blocks.
2. Use 6 tan blocks.
3. Use all the colors.

Arrowhead

***

#19
25points

Fill in this shape with blocks.
If the △ has a value of 5,
how much is the shape worth?



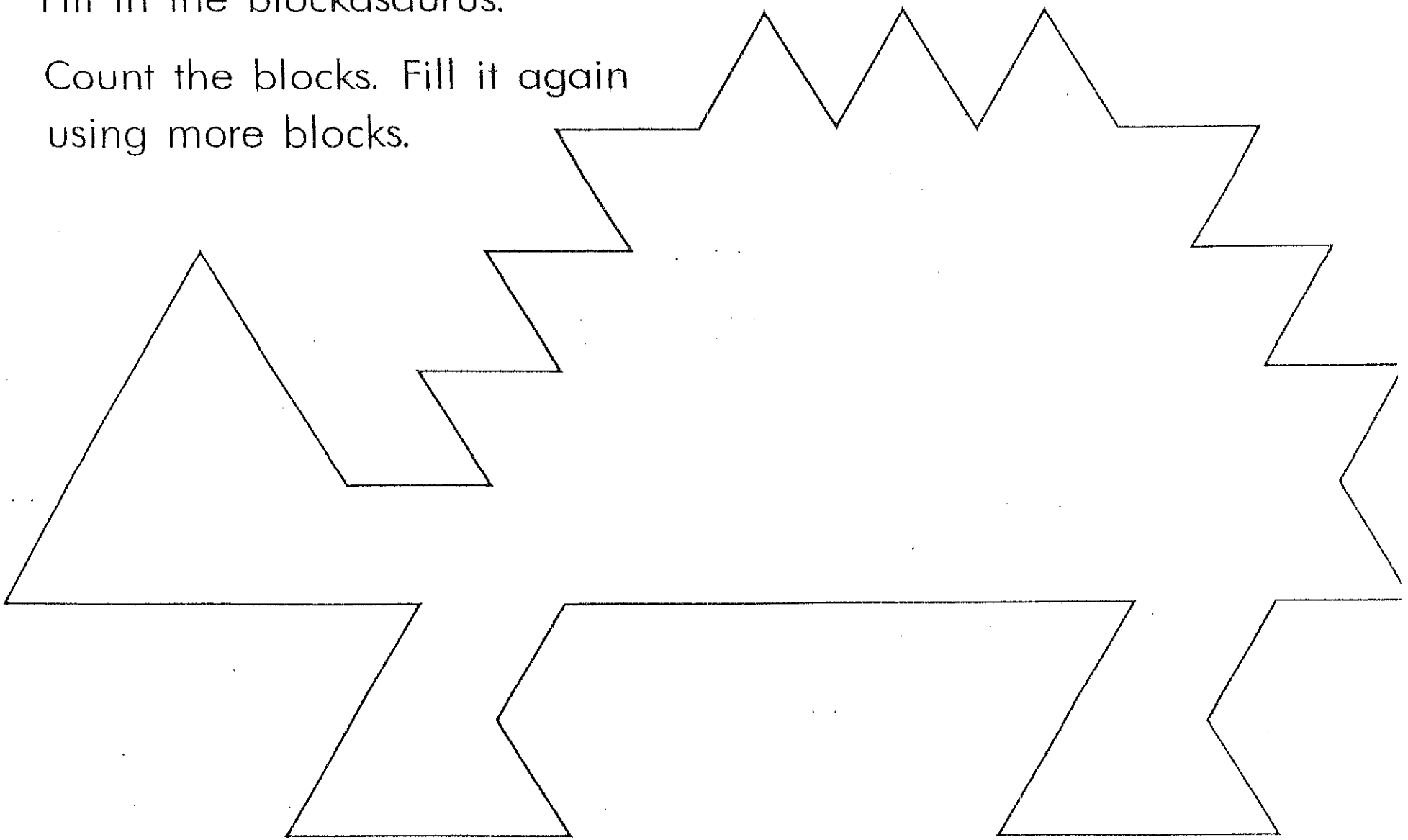
How much is the shape worth if the △
has a value of 7?

#20
10points

Blockasaurus

Fill in the blockasaurus.

Count the blocks. Fill it again using more blocks.



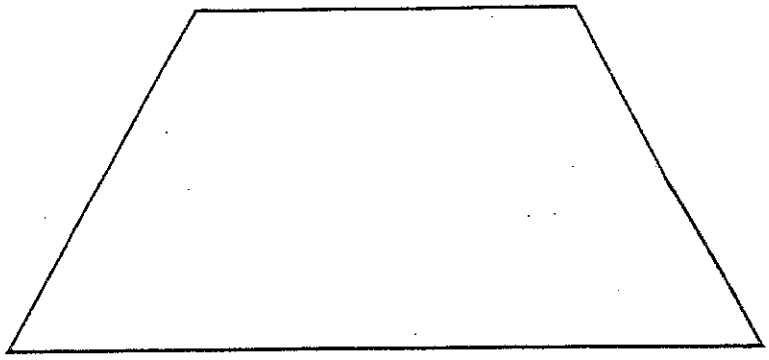
#21

Six Times Over

***

25 points

Fill in this shape 6 different ways.



Use 4 blocks and 1 color.

Use 5 blocks and 2 colors.

Use 6 blocks and 2 colors.

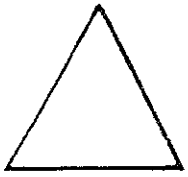
Use 7 blocks and 2 colors.

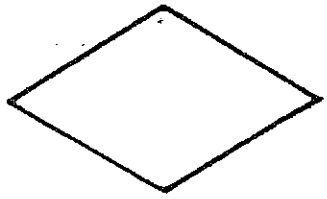
Use 8 blocks and 2 colors.

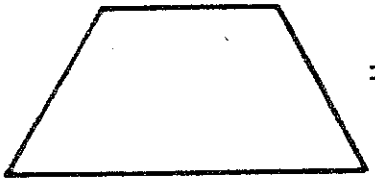
Use 9 blocks and 2 colors.

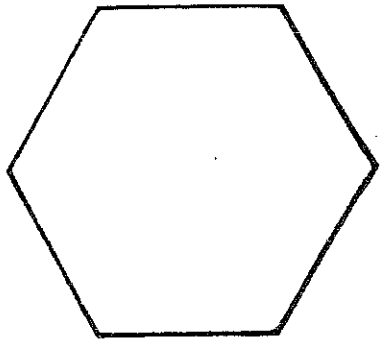
Shapes and Logic
#22
20points

If . . .

 = 1

 = 2

 = 3

 = 6

How many blocks do you need to make a design worth 18 ?

What is the least?

What is the most?

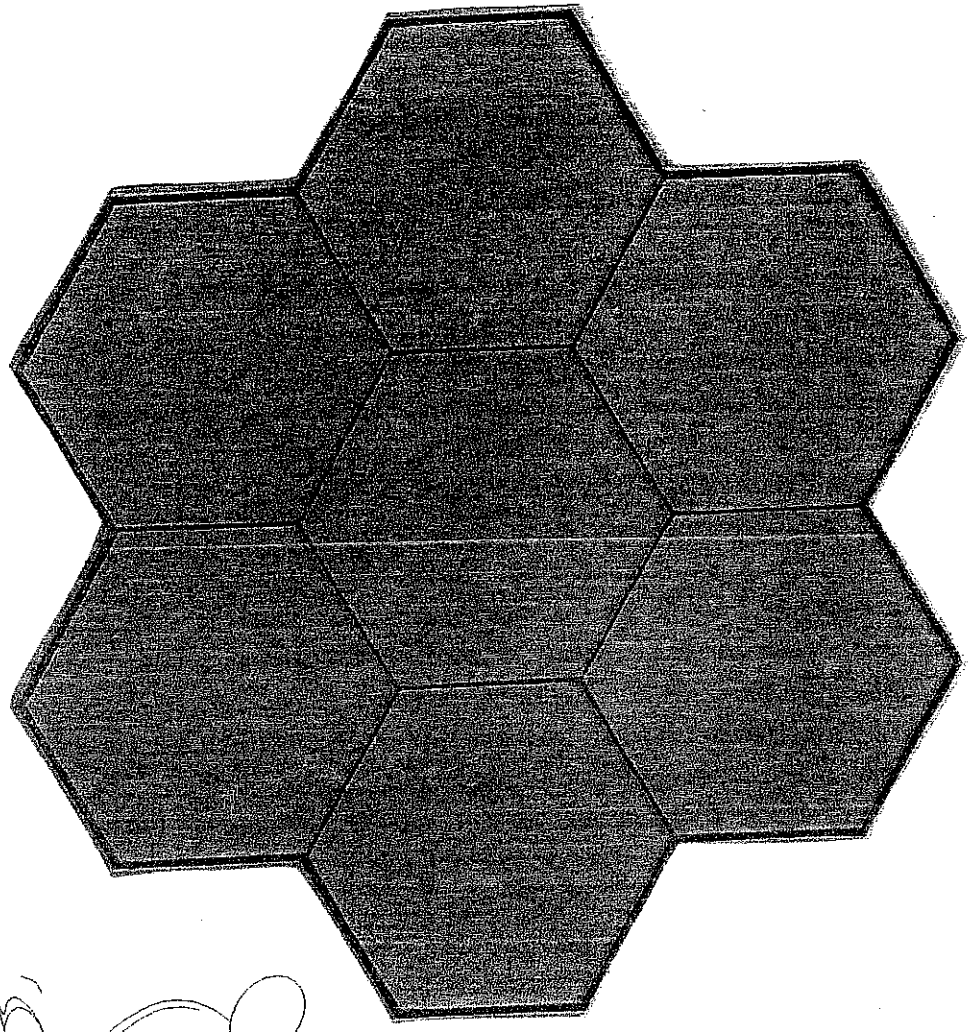
What are all the possible numbers of blocks needed?

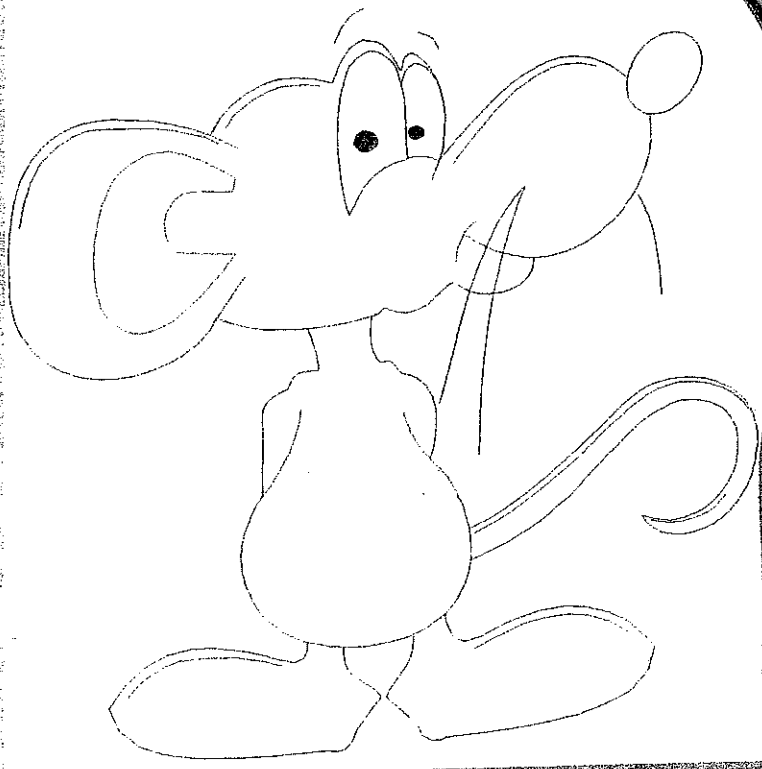
Prove it.

#23

5 points

What the Hex





Directions: Use the red trapezoids, the blue parallelograms, and the green triangle pattern blocks to play. Each player places one pattern block of his or her choice inside the outline. The piece must fit inside the lines. The loser is the person who places the last piece.

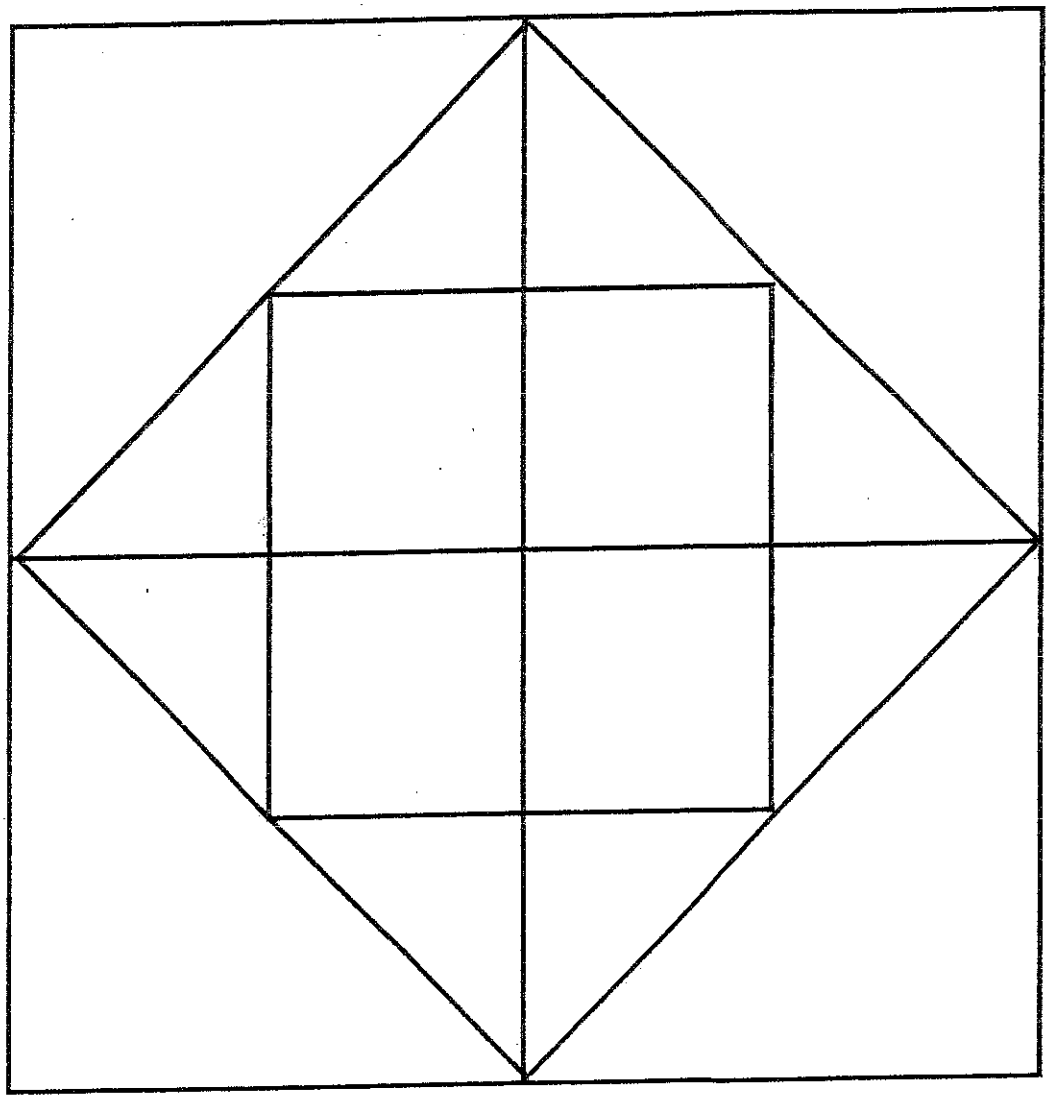
#24
15 points

Name _____

How Many Squares?

How many squares are in the picture? Count them and then color the picture.

There are _____ squares.



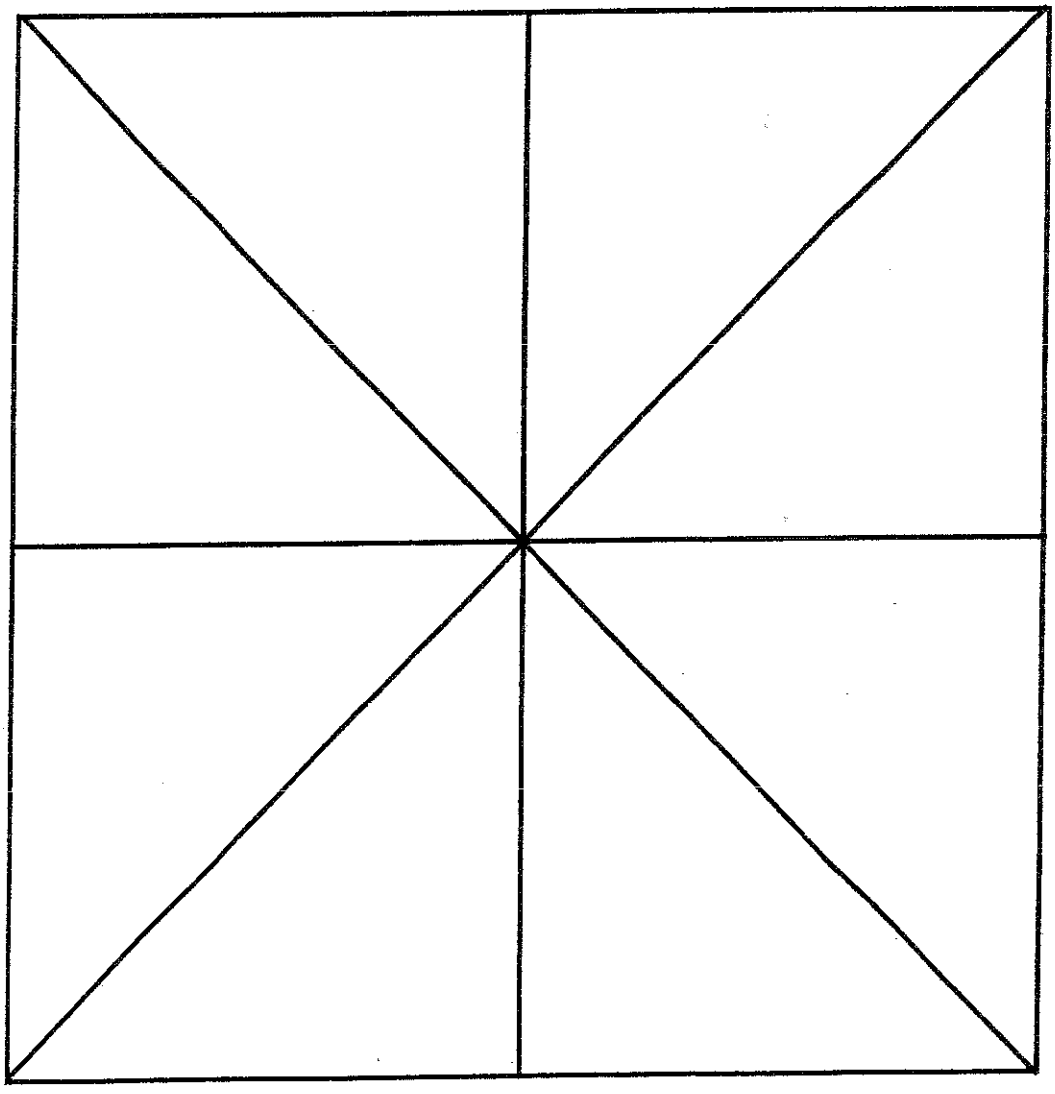
#25
Visual Discernment
15 points

Name _____

How Many Triangles?

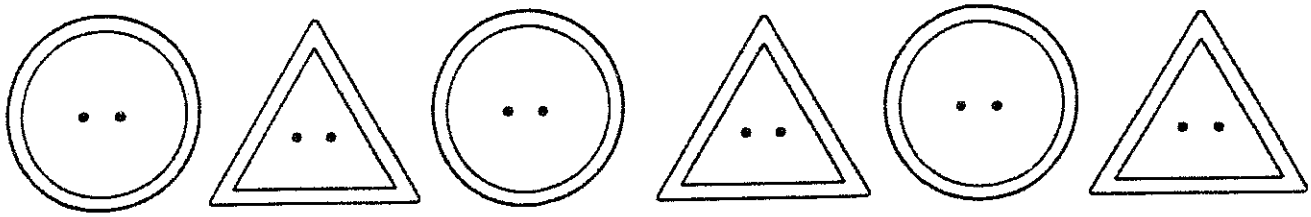
How many triangles are in the picture? Count them and then color the picture.

There are _____ triangles.



#26
5 points each

Bunches of Buttons



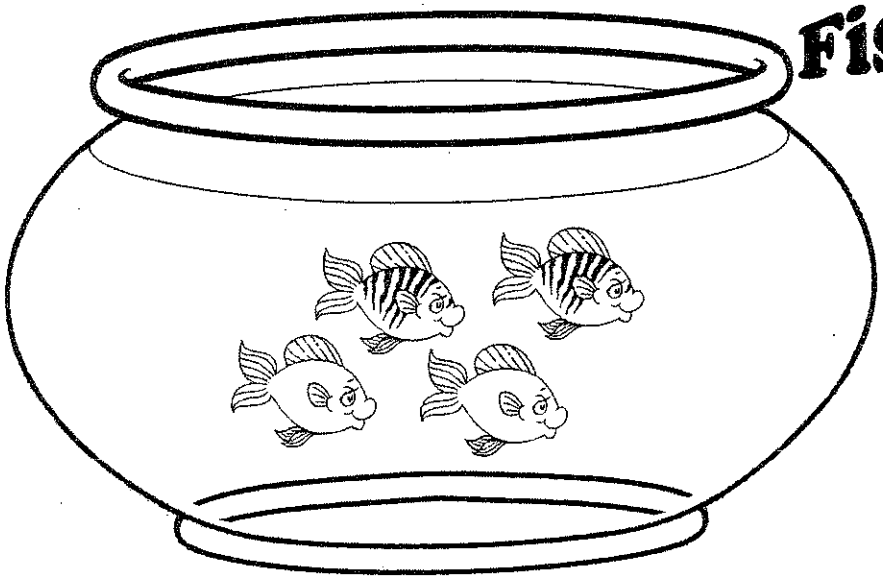
What would this pattern look like in letters?

_____

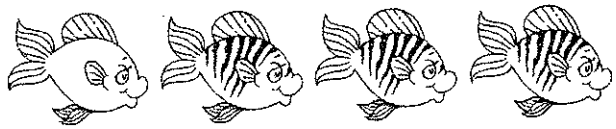
...in colors?

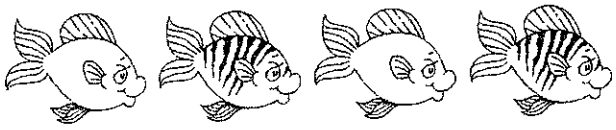
_____

Fishy Features



Which patterns can be made with the fish in the bowl?

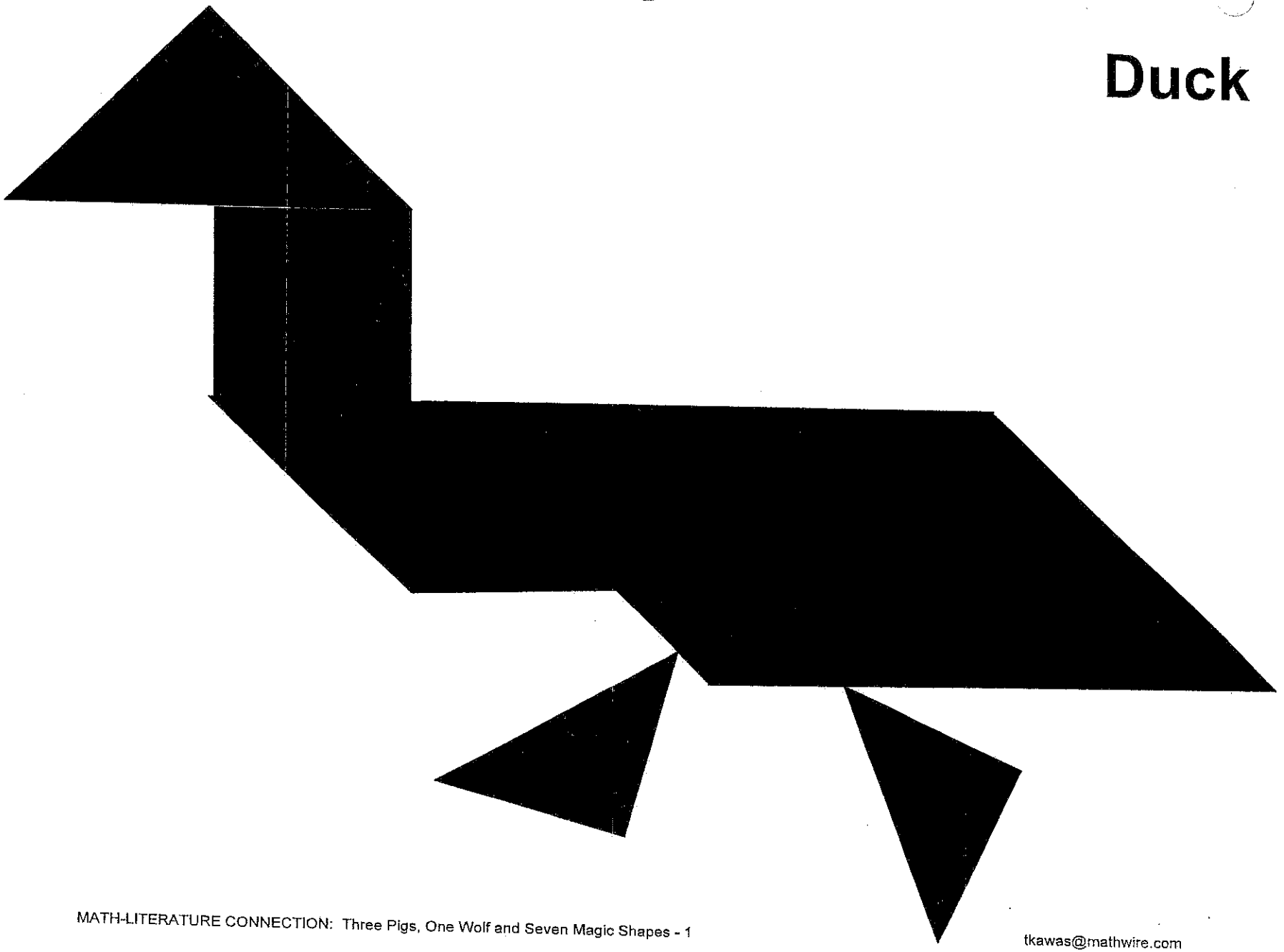
1.___ 

2.___ 

3.___ 

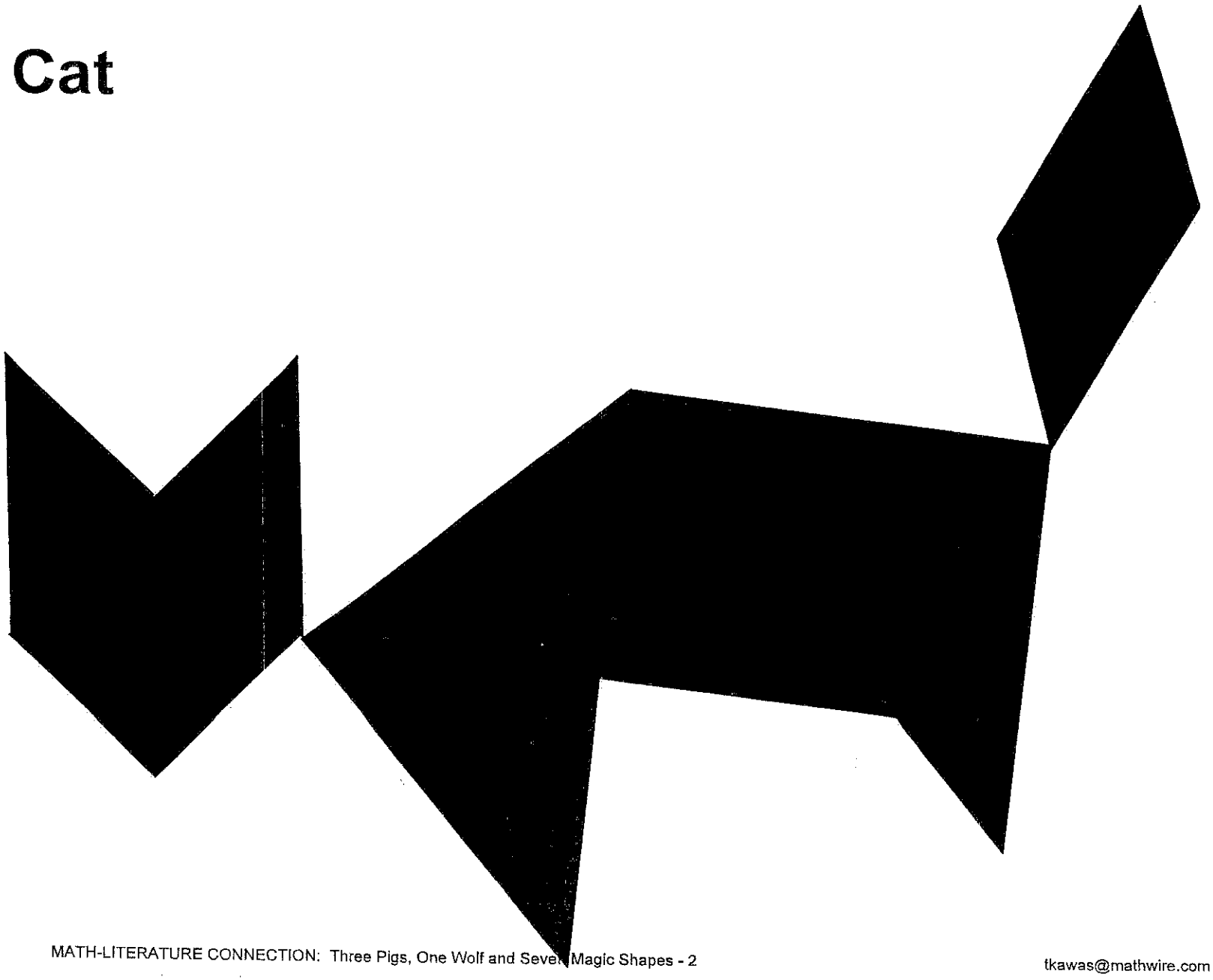
4.___ 

Duck



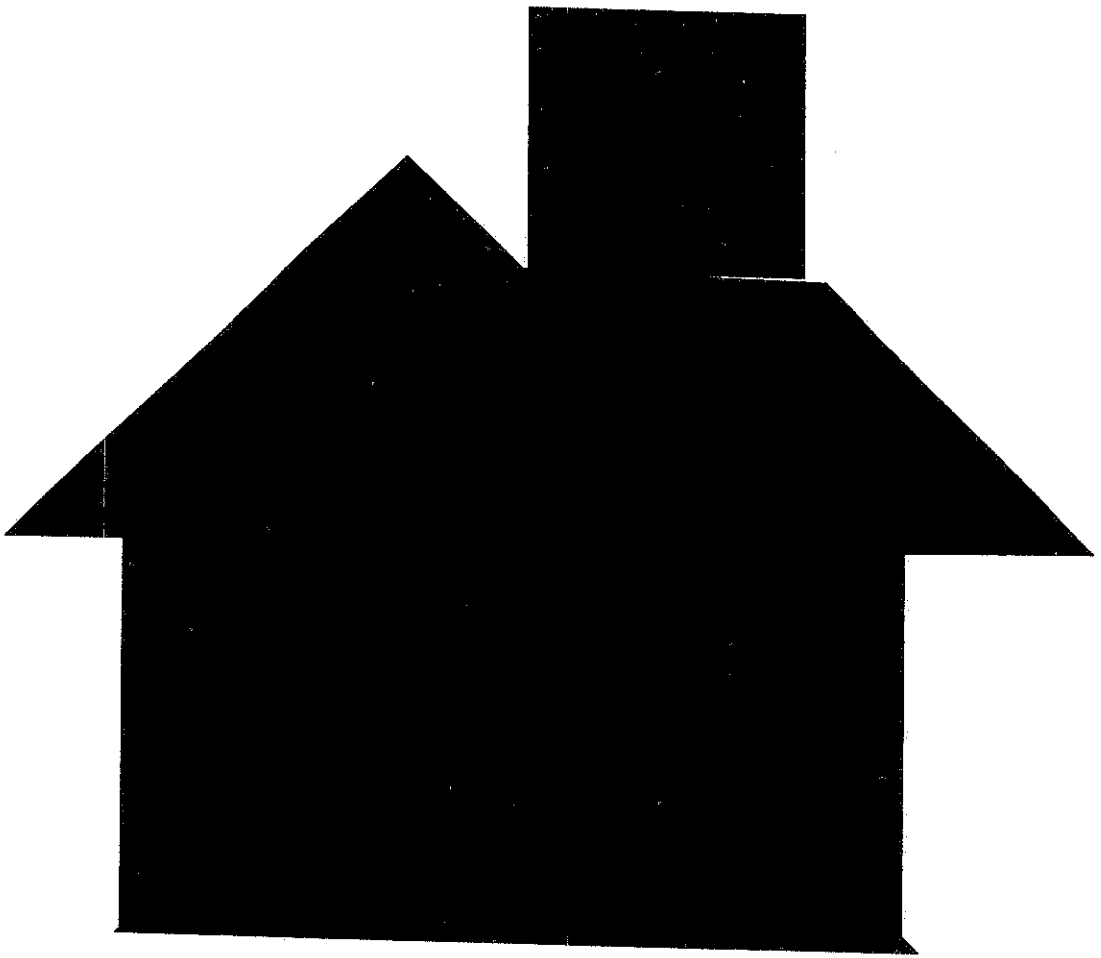
tkawas@mathwire.com

Cat



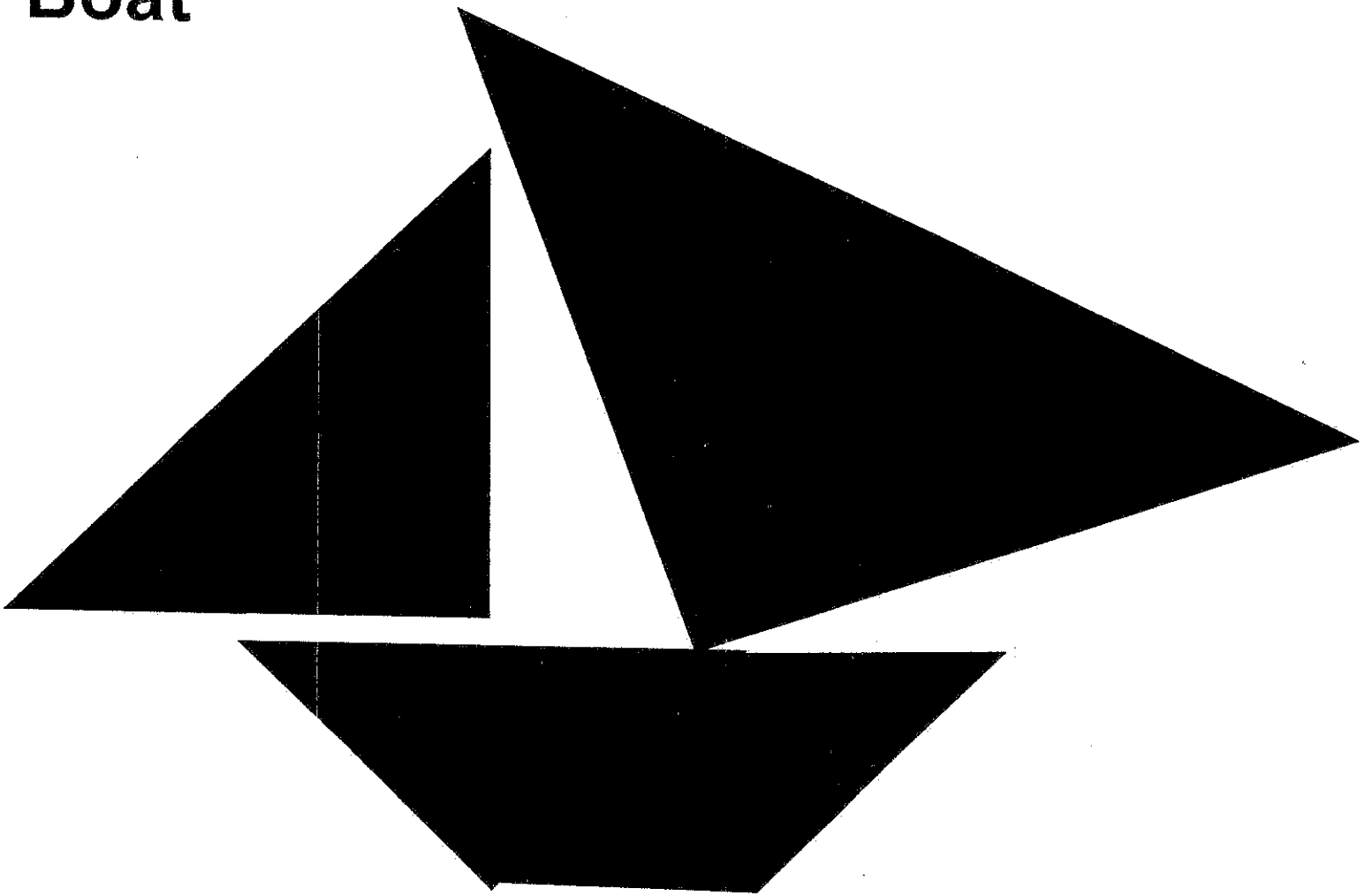
tkawas@mathwire.com

House



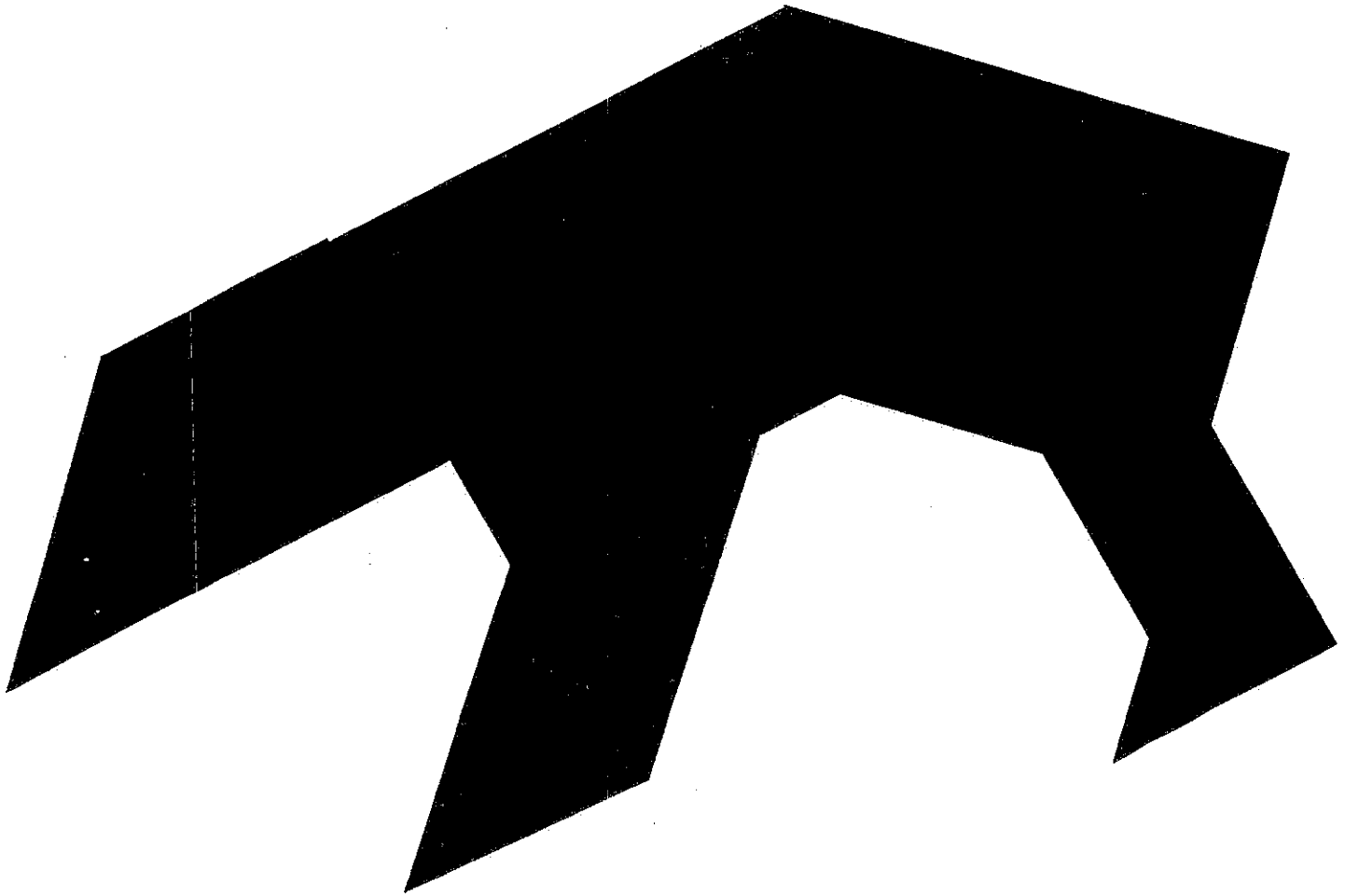
tkawas@mathwire.com

Boat



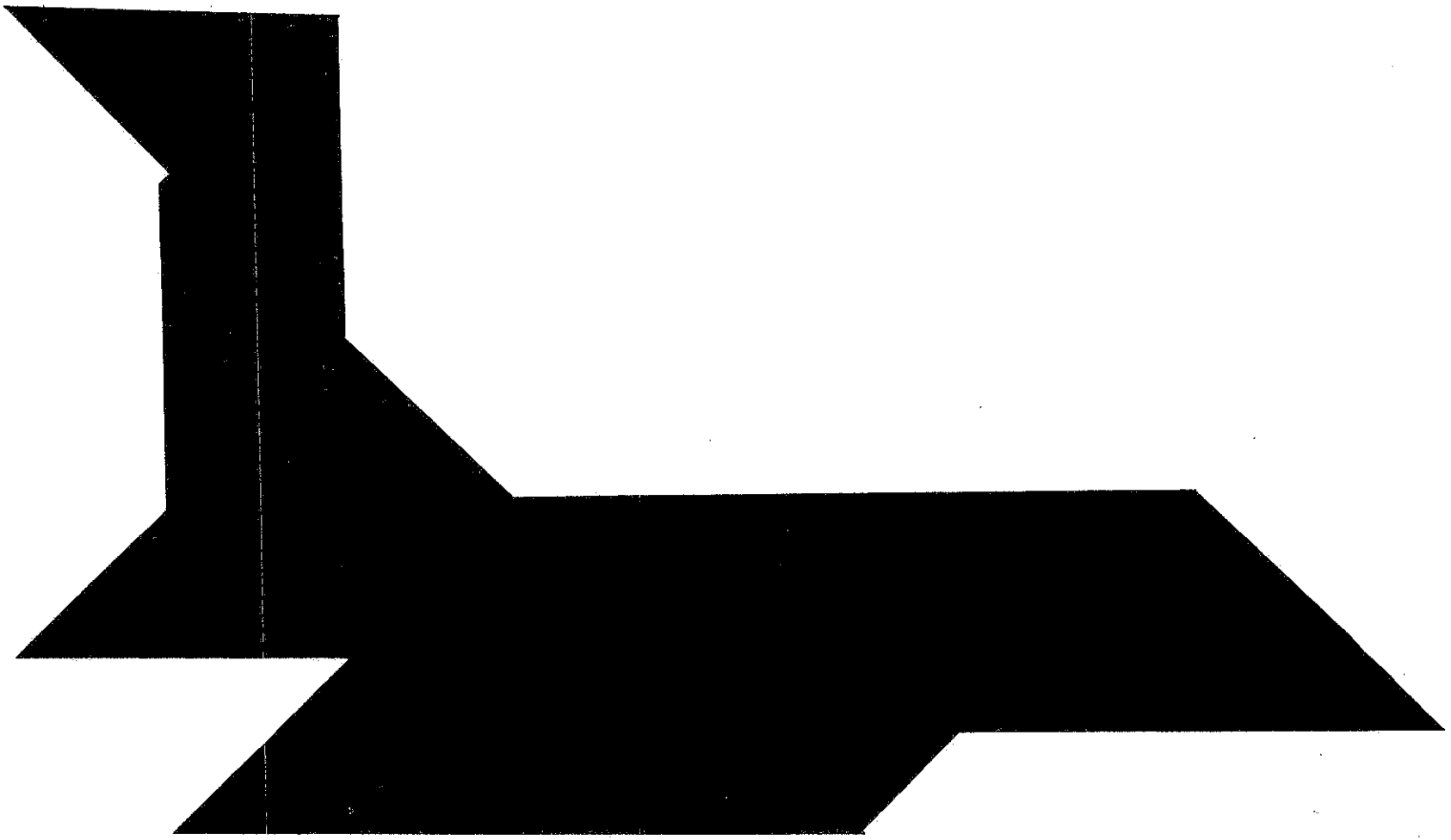
tkawas@mathwire.com

Bear



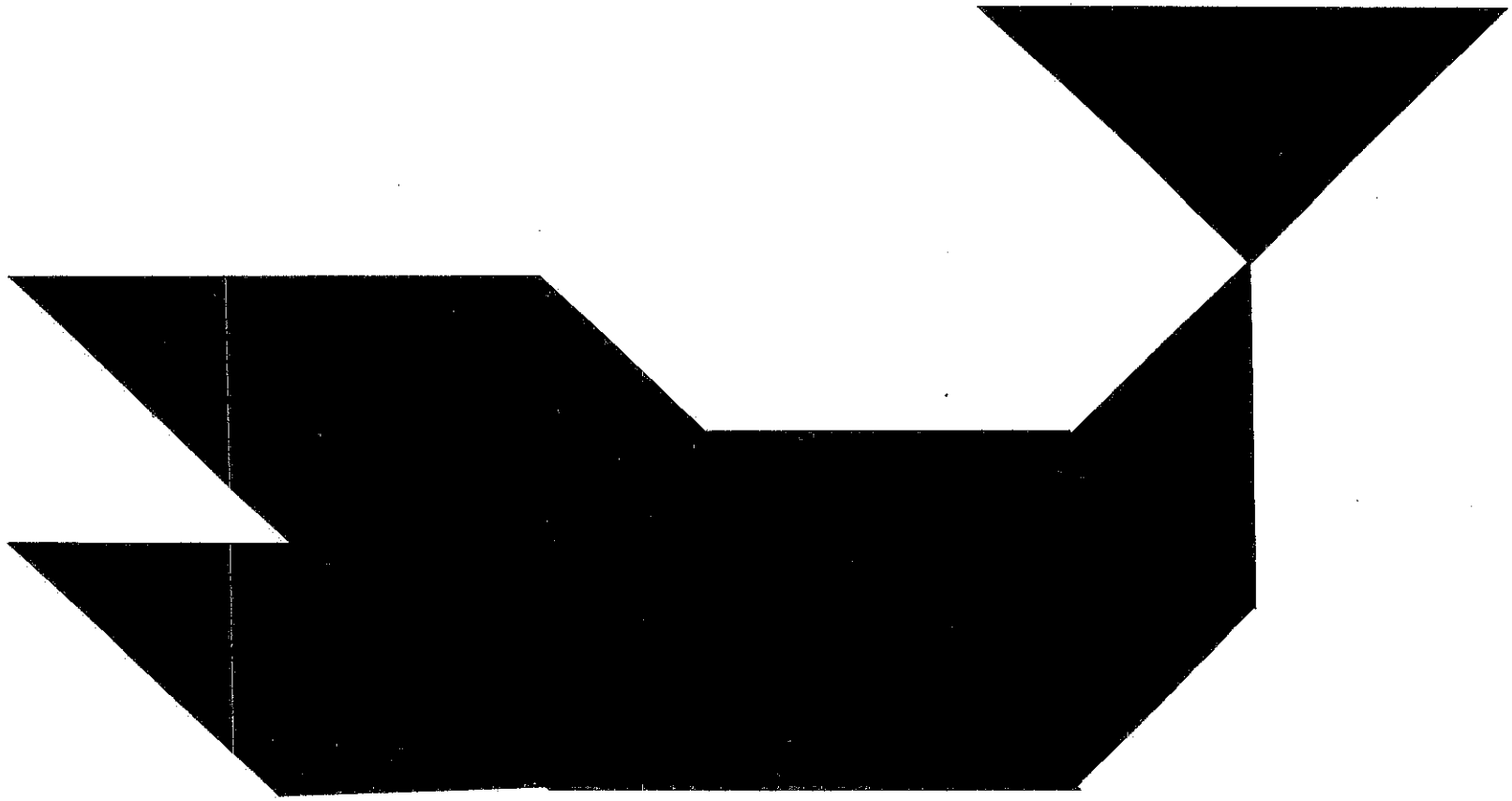
tkawas@mathwire.com

Seal



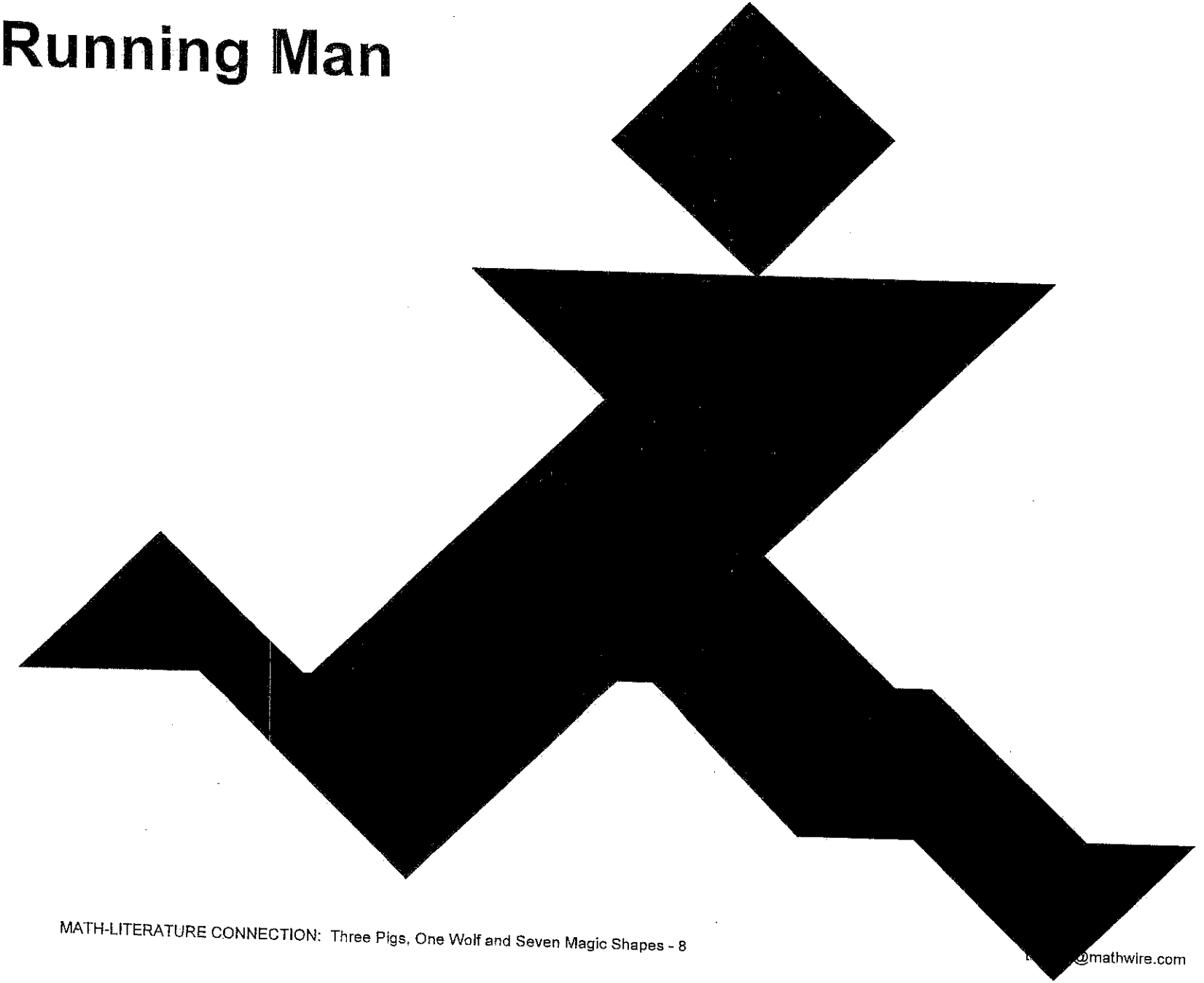
tkawas@mathwire.com

Whale

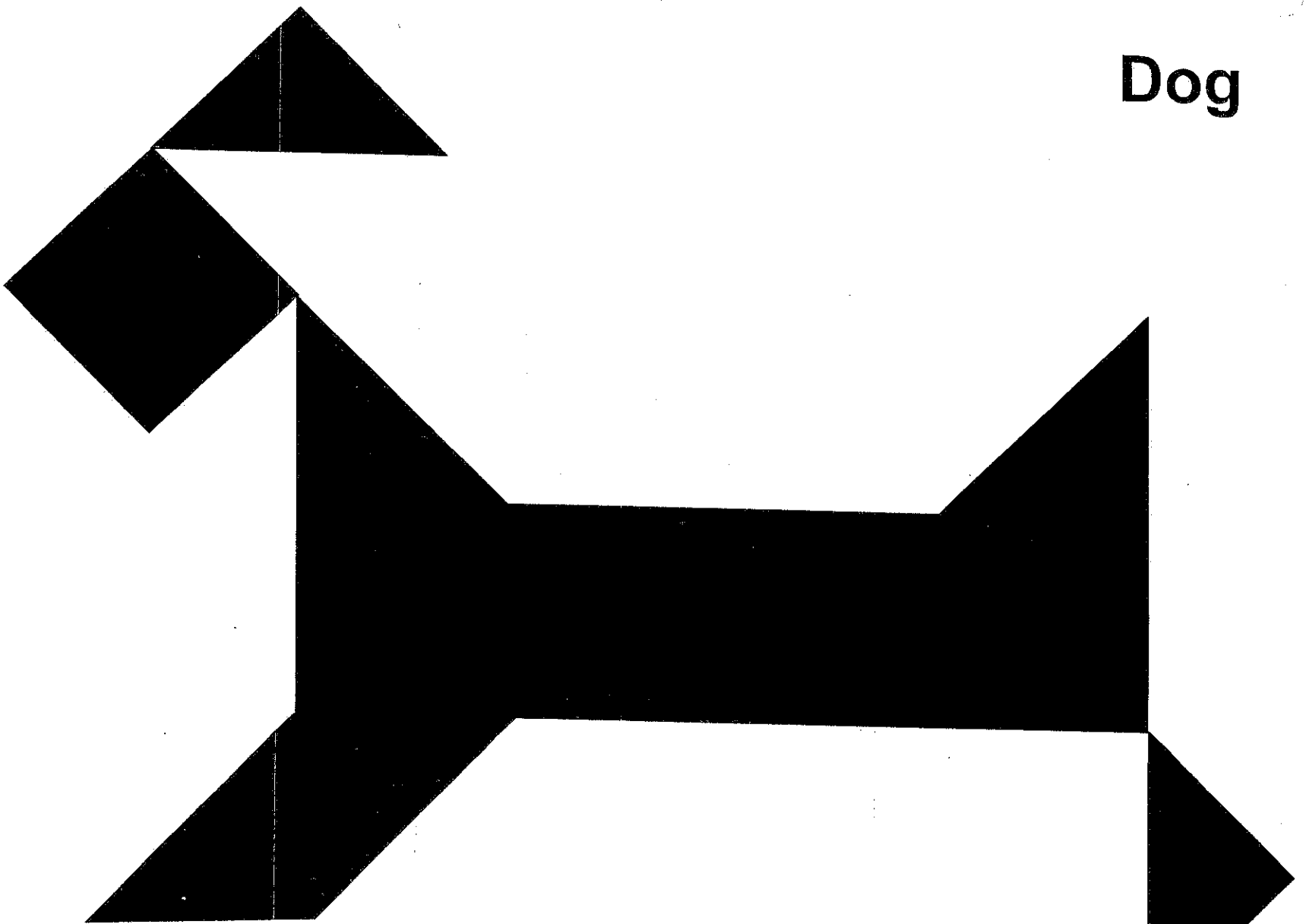


tkawas@mathwire.com

Running Man



Dog



tkawas@ma wire.com