



MATH MYSTERY: CASE OF THE GIANT GOBLIN

Date: _____

Everyone must evacuate Mathhattan city as soon as possible! Grumpy, the Goblin, has turned into a giant! He is causing massive damage to roads, cars, and homes as he stumbles through the city.

Gretchen, a friend of Grumpy's, reported the following to our headquarters earlier this morning:

"Grumpy doesn't mean any harm; this was an accident! He has been working late in his workshop, and something must've gone wrong with his latest invention. You see, Grumpy was working on building a machine that was supposed to make pizzas triple its size! Unfortunately, when it came to his first test on a pepperoni pizza, the voltage backfired onto Grumpy, and as seen, he has more than tripled in size! "

Even though Grumpy is trying not to hurt anyone, he won't sit still, and everyone is worried that he will step on them. Gretchen believes that Grumpy once invented the 'Shrinkinator,' which should reduce Grumpy back to his standard size! However, the police are having problems locating the shrinking device; it doesn't seem to be inside Grumpy's workshop. Could someone have stolen the Shrinkinator, or is it possible that Grumpy has misplaced it somewhere? The police need a great math detective to help them on this case!

MATH DETECTIVE NEEDED TO FIND OUT WHERE THE SHRINKINATOR IS TO SHRINK THE GIANT GOBLIN!

On the next page, you will find a list of possible locations that the Shrinkinator could be. Crack the codes to reveal essential clues on this case, and then use the clues to eliminate rows off the list. The last row remaining will tell you where the Shrinkinator is; and if someone is responsible for the theft. Hurry before the giant goblin causes more damage!

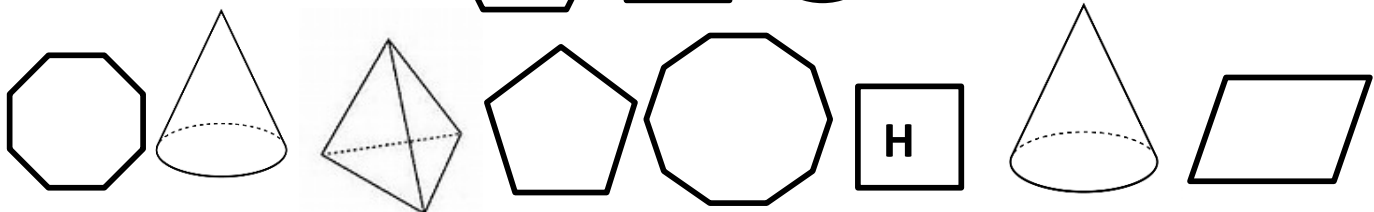
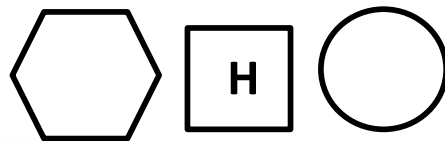
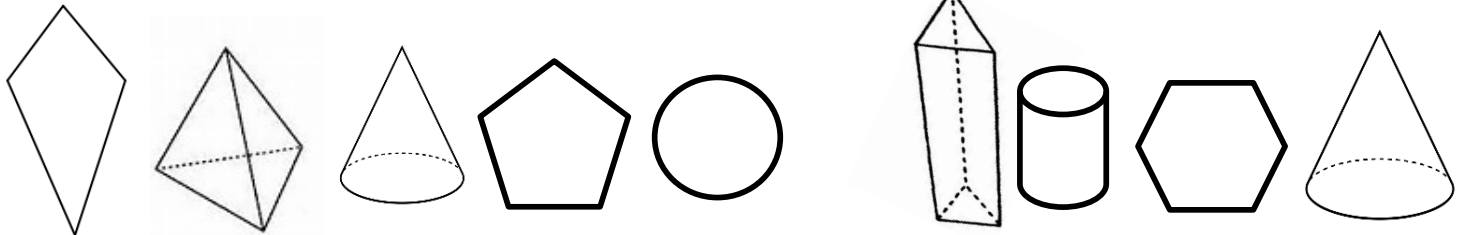
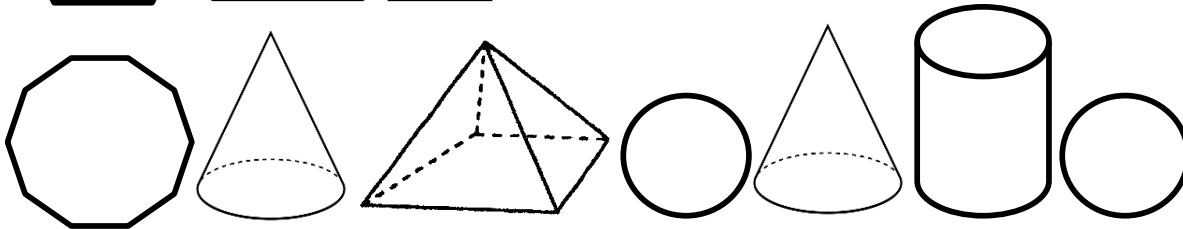
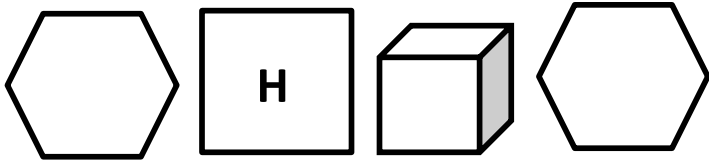
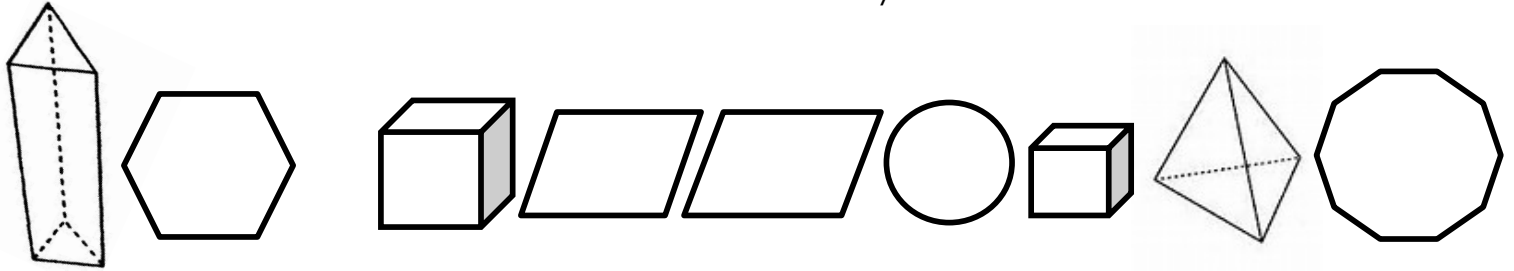
POSSIBLE LOCATIONS

Location	Indoors/ Outdoors?	Positional Direction	Close/ Far from Grumpy's Workshop	Stolen/ Misplaced?	<u>If stolen,</u> who could it possibly be?
Chuck's Car Yard	Outdoors	North	Close	Misplaced	<i>Not Stolen</i>
Dr Pewton's Science Laboratory	Indoors	East	Far	Stolen	Dr Pewton the Scientist
The Green Grocer's Garden	Outdoors	West	Far	Stolen	Gordon the Manager
Mathhattan Elementary School	Indoors	East	Close	Misplaced	<i>Not Stolen</i>
The Opera Arena	Outdoors	East	Far	Stolen	Ana the Director
Maggie's Supermarket	Indoors	South	Far	Stolen	Maggie the Manager
Hicks Research Facility	Indoors	East	Far	Stolen	Dr Hick's the Scientist
The Sunway Hotel	Indoors	West	Close	Stolen	Sally the Manager
The Jellybean Garden	Outdoors	South	Close	Misplaced	<i>Not Stolen</i>
The Stellar Station	Indoors	North	Far	Stolen	Dr Luna the Scientist
The Diamond Theater	Indoors	South	Far	Stolen	Brando the Director
Sato's Sushi Shop	Indoors	East	Close	Stolen	Sato the Manager
Testing Grounds of Mites and Lice	Outdoors	West	Far	Stolen	Dr Misalov the Scientist
Busy Bean Café	Indoors	South	Close	Stolen	Jamie the Manager
Riverside Park	Outdoors	West	Close	Misplaced	<i>Not Stolen</i>
The Grandeur	Indoors	North	Far	Stolen	Matilda the Director
Electric Enterprises	Indoors	South	Far	Stolen	Dr Electra the Scientist

Solve the clues and then cross the locations off the list until one remains! The last location remaining is where you will find the Shrinkinator; the information in that row will also tell you if anyone needs to be arrested.

IDENTIFYING 2-D & 3-D SHAPES – CLUE 1

Crack the code by matching the shape names to the correct 2-D or 3-D shape. Use the letter paired with each shape name to place inside the shape. There may be more than one of the same shape! That means put the same letter inside. The first one has been done for you!

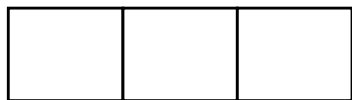


Square = H	Parallelogram = P	Cylinder = N
Square Pyramid = M	Circle = E	Cone = O
Triangular Prism = I	Triangular Pyramid = R	Hexagon = T
Octagon = W	Kite = B	Decagon = S
Cube = A	Pentagon = K	

PERIMETER – CLUE 2

Discover another clue by finding the perimeter of the figures below. Use your answers (numbers only) to match and place the letters in the boxes to crack the code. Put the letter in every box that it matches your answer in (there may be more than one!)

The first one has been done for you.



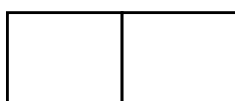
25 12 44



30 44 16 26 21 44



20 23 14 25



19 44



14 25 27 24 44 30



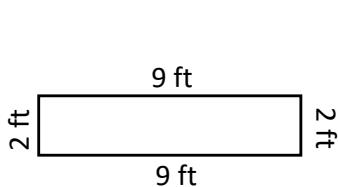
26 31 30 27 27 24 14



22 27 24

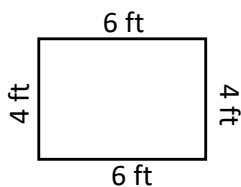


14 28 22 44 25 40



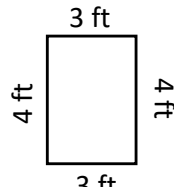
Perimeter = 22 ft

F



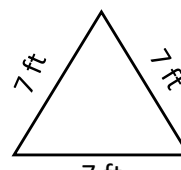
P = _____

M



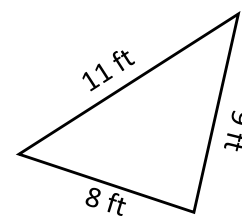
P = _____

S



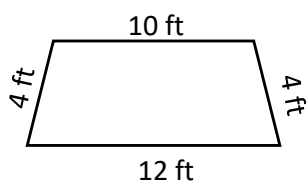
P = _____

C



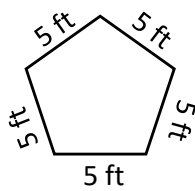
P = _____

A



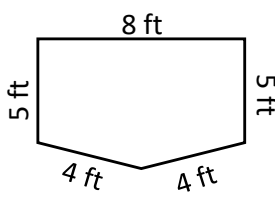
P = _____

D



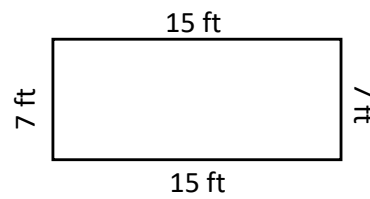
P = _____

T



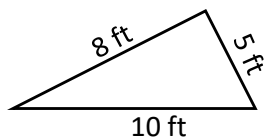
P = _____

I



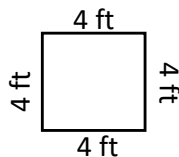
P = _____

E



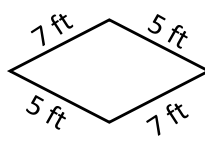
P = _____

U



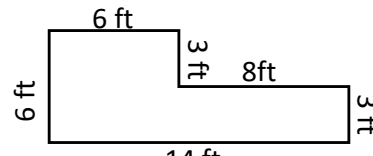
P = _____

V



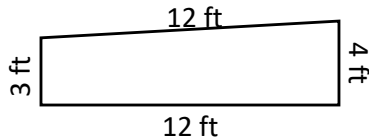
P = _____

R



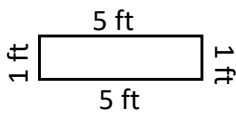
P = _____

Y



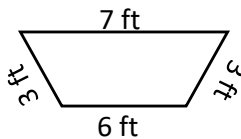
P = _____

N



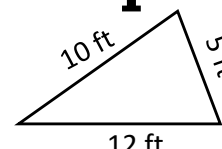
P = _____

H



P = _____

B



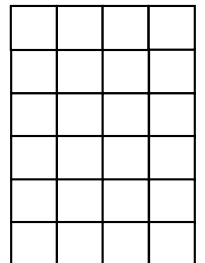
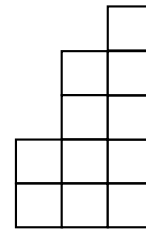
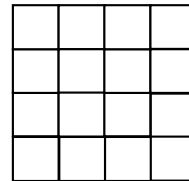
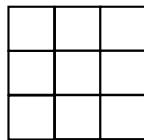
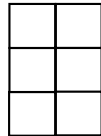
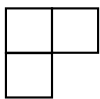
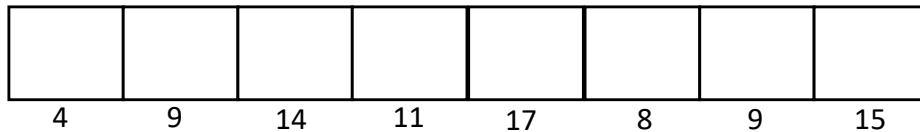
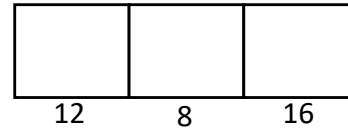
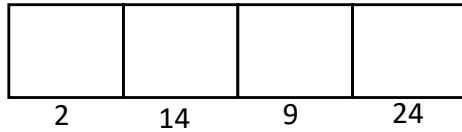
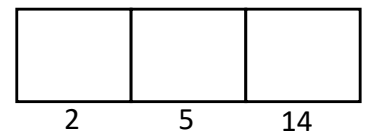
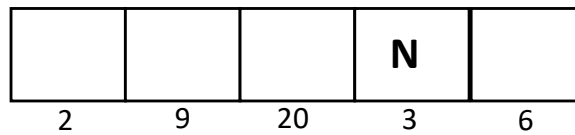
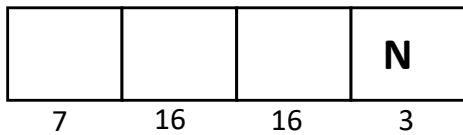
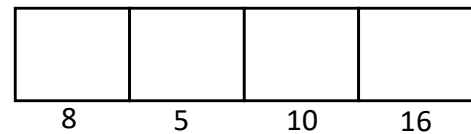
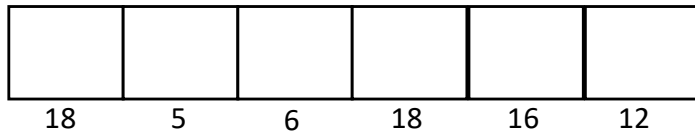
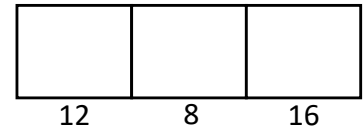
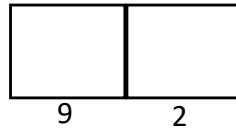
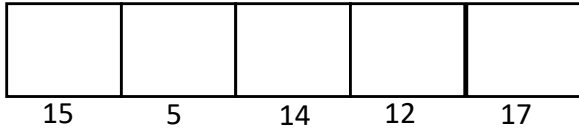
P = _____

O

AREA (USING UNIT SQUARES) – CLUE 3

Discover another clue by finding the area of the figures below in square units. Use your answers (numbers only) to match and place the letters in the boxes to crack the code. Put the letter in every box that it matches your answer in (there may be more than one!)

The first one has been done for you.



Area = 3 su
N

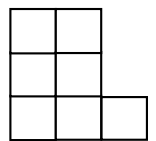
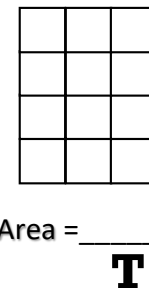
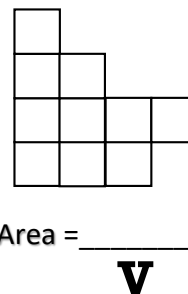
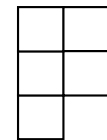
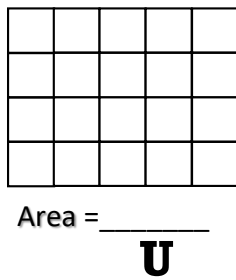
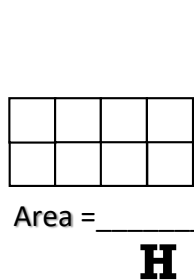
Area = _____
D

Area = _____
O

Area = _____
E

Area = _____
K

Area = _____
M



Area = _____
H

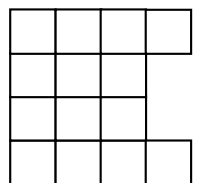
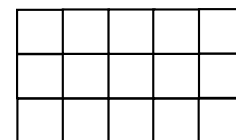
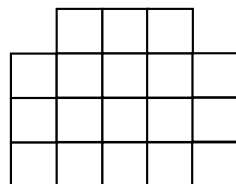
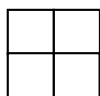
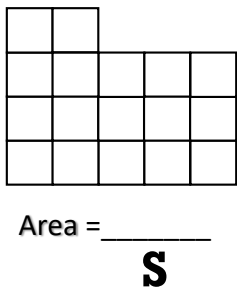
Area = _____
U

Area = _____
A

Area = _____
V

Area = _____
T

Area = _____
B



Area = _____
S

Area = _____
W

Area = _____
G

Area = _____
F

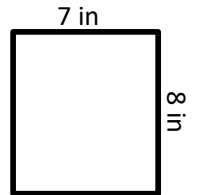
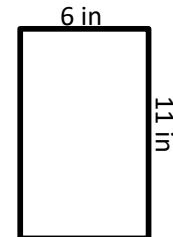
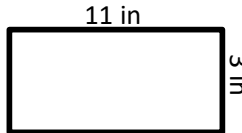
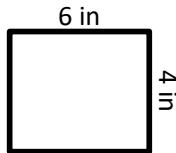
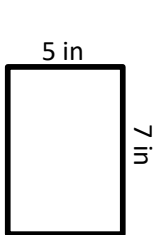
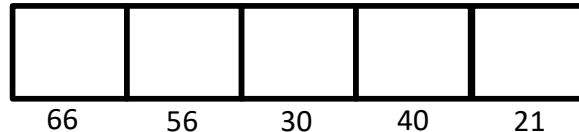
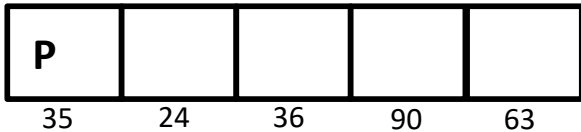
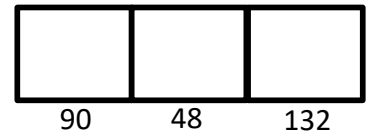
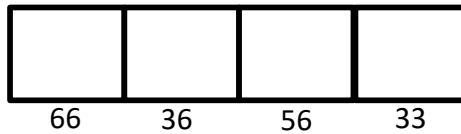
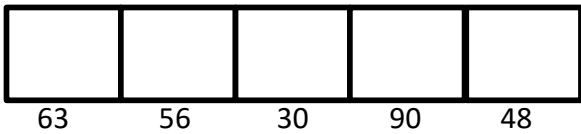
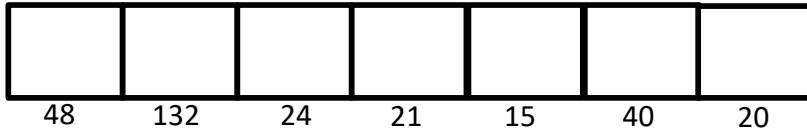
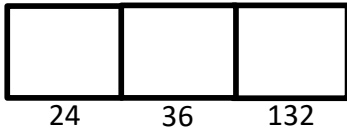
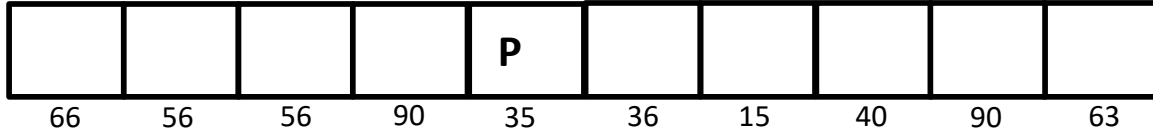
Area = _____
P

Area = _____
R

AREA OF RECTANGLES – CLUE 4

Discover another clue by finding the area of the rectangles below. Use your answers (numbers only) to match and place the letters in the boxes to crack the code. Put the letter in every box that it matches your answer in (there may be more than one!)

The first one has been done for you.



Area = 35 in²

Area = _____

Area = _____

Area = _____

Area = _____

Area = _____

P

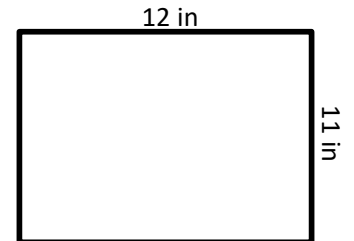
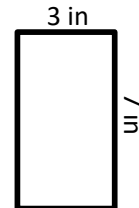
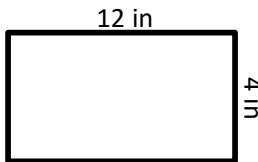
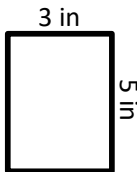
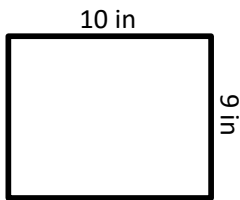
A

G

M

F

O



Area = _____

Area = _____

Area = _____

Area = _____

Area = _____

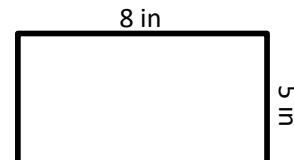
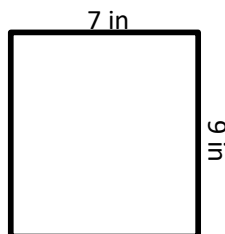
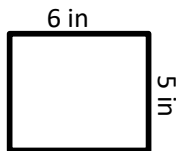
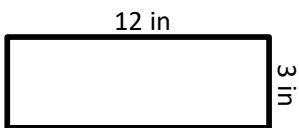
T

I

H

D

E



Area = _____

Area = _____

Area = _____

Area = _____

R

U

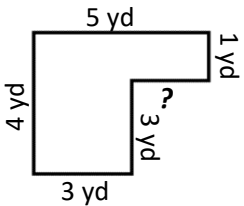
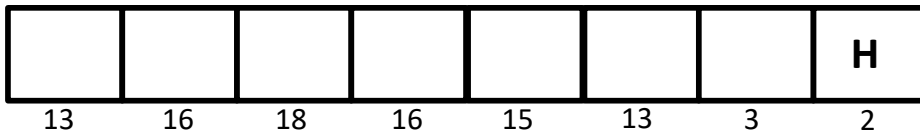
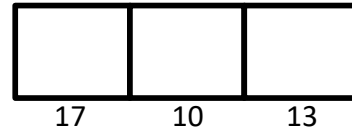
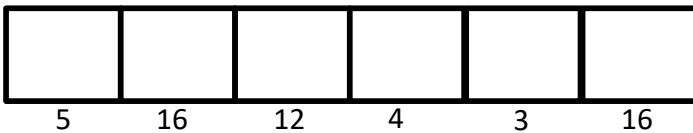
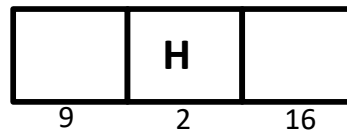
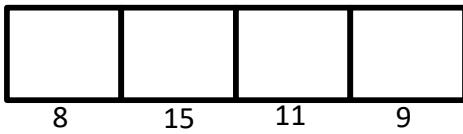
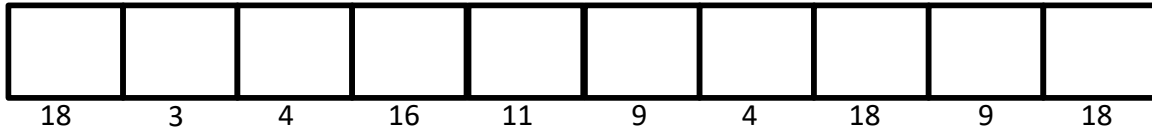
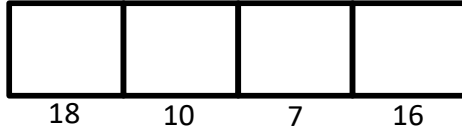
S

N

PERIMETER: Find The Missing Length – CLUE 5

Discover a clue by using the information given to find the missing length of the figures below. Use your answers (numbers only) to match and place the letters in the boxes to crack the code. Put the letter in every box that it matches your answer in (there may be more than one!)

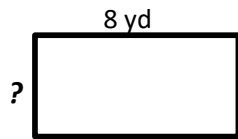
The first one has been done for you.



Perimeter = 18 yd

? = 2 yd

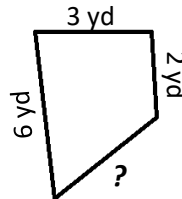
H



Perimeter = 22 yd

? = _____

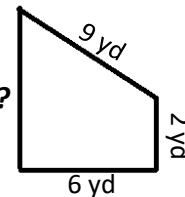
C



Perimeter = 18 yd

? = _____

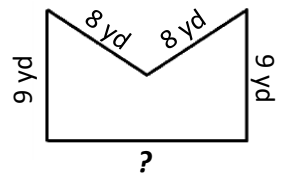
M



Perimeter = 27 yd

? = _____

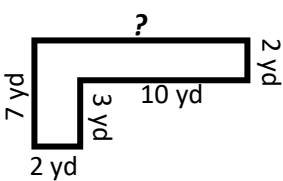
O



Perimeter = 49 yd

? = _____

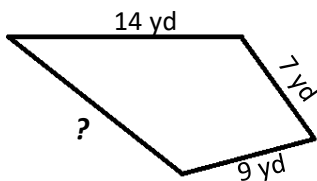
A



Perimeter = 36 yd

? = _____

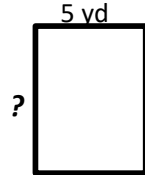
V



Perimeter = 46 yd

? = _____

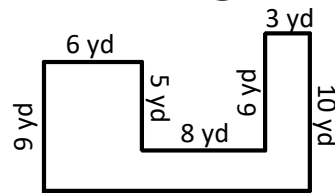
E



Perimeter = 26 yd

? = _____

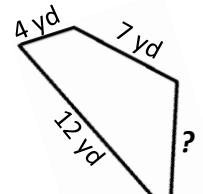
W



Perimeter = 64 yd

? = _____

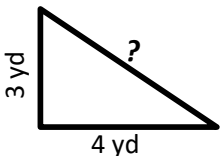
F



Perimeter = 32 yd

? = _____

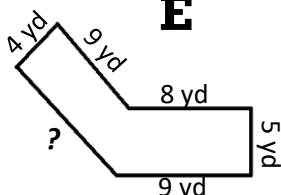
T



Perimeter = 12 yd

? = _____

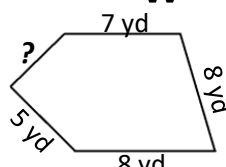
D



Perimeter = 46 yd

? = _____

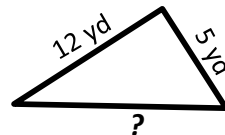
N



Perimeter = 32 yd

? = _____

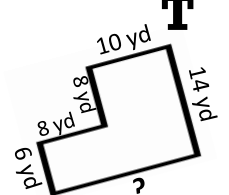
I



Perimeter = 30 yd

? = _____

R



Perimeter = 64 yd

? = _____

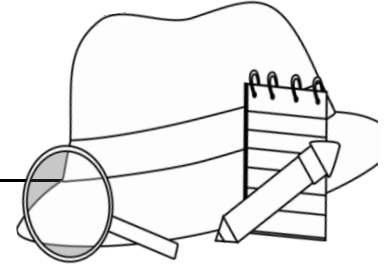
S

SOLVE THE MYSTERY: WHERE IS GRUMPY'S SHRINKINATOR?



Detective

(your name)



Has discovered that the Shrinkinator Device is located at:

Does anyone need to be arrested for theft? If so, who is under arrest?

(Hint: The information is given in the row of the location)

Clues Checklist:

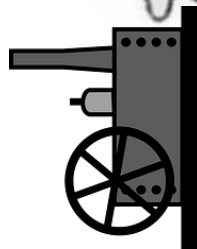
Clue 1

Clue 2

Clue 3

Clue 4

Clue 5



Parent/Guardian to check and tick

Well done! You have found the Shrinkinator! You aim the device carefully at the giant goblin, as you push the large button a blue laser beam strikes Grumpy, making him shrink in size! Be careful not to go too far! Thanks to your great detective work, everyone can return back to the city without any fear of being stepped on!

Oops! No that is not where the Shrinkinator is. Go over, check your clues and try again. The giant goblin continues to cause damage and chaos in the city!