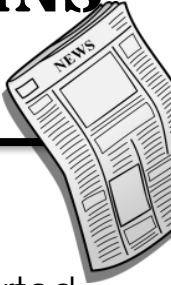


MATH MYSTERY:

CASE OF THE GRADUATION GREMLINS

Date: _____



It is almost the end of the school year, but trouble has struck Mathhattan Elementary School! Teachers and students have reported that a gang of gremlins have been vandalizing the school and taking all sorts of important items required for graduation celebrations.

Mrs Frumpy complained, "The awards, certificates, memory books, games, prizes, hats and even my microphone have been taken! How are my students going to graduate now? They are so disappointed with these mischievous gremlins trying to ruin the end of year for everyone."

Sophia, a student, cried, "We were going to have a graduation party with food and games, but those terrible gremlins just stormed right into the classroom and took them all!"

Another student, named Anthony, put in the following statement, "I saw a group of gremlins sneak into the Principal's office and run out with her books, awards, trophies and computer! Someone must find where the gremlins are hiding with all of our things so that we can graduate and celebrate the end of year properly!"

MATH DETECTIVE NEEDED TO SEEK OUT THE GREMLIN GANG HIDEOUT AND RECOVER THE STOLEN GRADUATION ITEMS!!!

The police have made a list of all the possible places the gang of gremlins could be hiding out in. However, they need a super detective with math skills to help them solve this case.

Let's hope that we can find these gremlins trying to ruin graduation, recover all of the stolen items and put a stop to them ruining the end of the school year for everyone!



POSSIBLE HIDEOUTS

Hideout Place	Distance From Mathhattan Elementary School	Size	Temperature of Hideout	Positional Direction	Is it Underground? Yes/NO
Algebra Island	Far	Large	Warm	West	No
Crystal Cave	Close	Large	Cold	East	No
Sewer	Close	Large	Cold	North	Yes
Abandoned Theme Park	Far	Large	Warm	South	No
Pets Paradise Hotel	Close	Large	Warm	East	No
Crimson Chambers	Close	Medium	Cold	South	Yes
Chuck's Car Yard	Far	Medium	Warm	West	No
Pepe's Pizzeria Store Room	Close	Small	Cold	North	No
Behind the Donut Queen's Shop	Far	Small	Warm	South	No
The Historical Catacombs	Close	Large	Cold	South	Yes
Mrs Frumpy's Basement	Close	Small	Cold	North	Yes
The Graveyard	Far	Large	Cold	East	No
Mathhattan Subway Station	Close	Medium	Warm	South	Yes
The Local IT Company	Close	Medium	Cold	South	No
Slimewort's Abandoned Lair	Close	Small	Cold	West	Yes

**Solve the clues and then cross the hideout place off the list until one remains!
The last place remaining is where the gremlins are hiding with all of the graduation items!**

MULTIPLICATION FACTS – CLUE 1

Crack the code by completing the multiplication sentences below. Use your answers to match and place the letters in the boxes to reveal the clue. 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!

44	33	60	80	24

					U	
33	80	20	60	32	12	44

	U		
18	12	42	44

81	60

132	35	32	42	60

44	32

44	33	60

42	132	33	32	32	35

$$3 \times 4 = \underline{12}$$

U

$$5 \times 7 = \underline{\quad}$$

L

$$4 \times 6 = \underline{\quad}$$

R

$$8 \times 10 = \underline{\quad}$$

I

$$2 \times 9 = \underline{\quad}$$

M

$$11 \times 3 = \underline{\quad}$$

H

$$12 \times 5 = \underline{\quad}$$

E

$$6 \times 7 = \underline{\quad}$$

S

$$8 \times 4 = \underline{\quad}$$

O

$$9 \times 9 = \underline{\quad}$$

B

$$4 \times 11 = \underline{\quad}$$

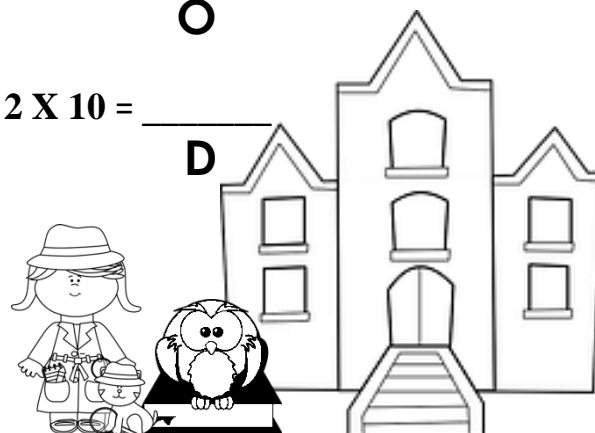
T

$$2 \times 10 = \underline{\quad}$$

D

$$12 \times 11 = \underline{\quad}$$

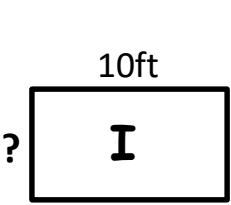
C



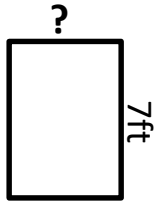
Customary Units

AREA - CLUE 2

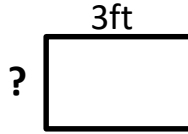
Reveal a clue about the Gremlins hideout place by using the information given for each rectangle and solving the length of the side marked with a question mark (?). Use your answers to find which letter to place inside each shape. The first one has been done for you!



Area: 30ft^2
 $? = 3\text{ft}$



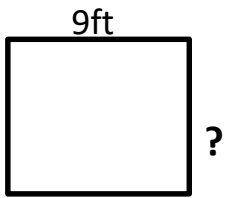
Area: 28ft^2



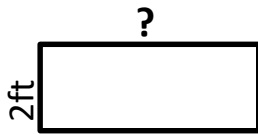
Area: 6ft^2



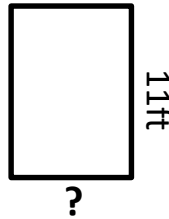
Area: 100ft^2



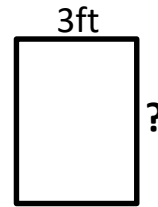
Area: 72ft^2



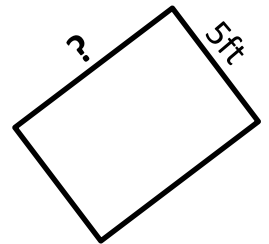
Area: 24ft^2



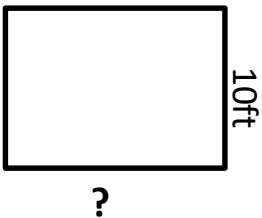
Area: 77ft^2



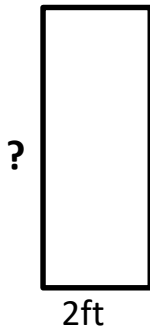
Area: 18ft^2



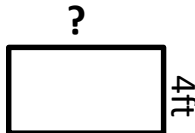
Area: 50ft^2



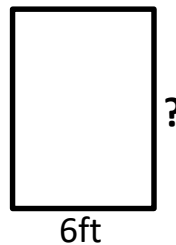
Area: 110ft^2



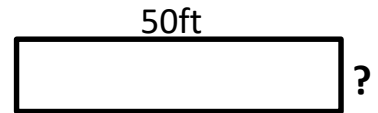
Area: 30ft^2



Area: 36ft^2



Area: 120ft^2



Area: 50ft^2

3ft = I

6ft = L

2ft = I

9ft = A

12ft = C

11ft = P

4ft = T

1ft = E

8ft = A

7ft = O

10ft = D

20ft = C

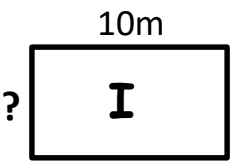
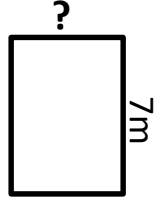
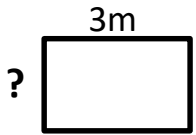

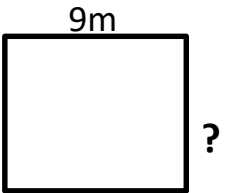
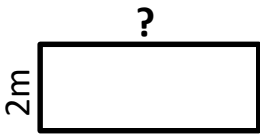
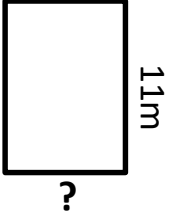
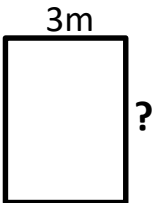
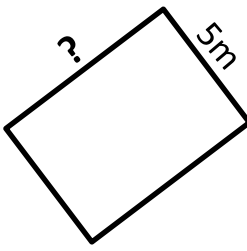
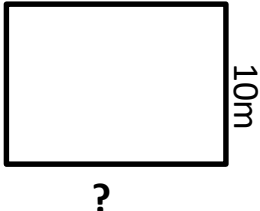
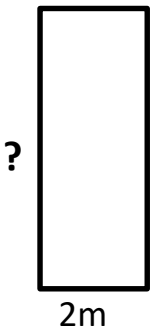
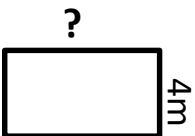
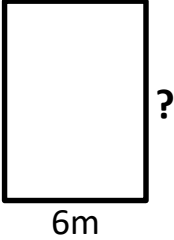
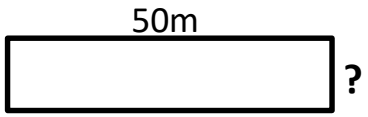
5ft = S

15ft = L

Metric Units

AREA – CLUE 2

Reveal a clue about the Gremlins hideout place by using the information given for each rectangle and solving the length of the side marked with a question mark (?). Use your answers to find which letter to place inside each shape. The first one has been done for you!

				
<p>Area: 30m^2 ? = 3m</p>	<p>Area: 28m^2</p>	<p>Area: 6m^2</p>	<p>Area: 100m^2</p>	
				
<p>Area: 72m^2</p>	<p>Area: 24m^2</p>	<p>Area: 77m^2</p>	<p>Area: 18m^2</p>	<p>Area: 50m^2</p>
				
<p>Area: 110m^2</p>	<p>Area: 30m^2</p>	<p>Area: 36m^2</p>	<p>Area: 120m^2</p>	<p>Area: 50m^2</p>

$$3\text{m} = \text{I}$$

$$6\text{m} = \text{L}$$

$$2\text{m} = \text{I}$$

$$9\text{m} = \text{A}$$

$$12\text{m} = \text{C}$$

$$11\text{m} = \text{P}$$

$$4\text{m} = \text{T}$$

$$1\text{m} = \text{E}$$

$$8\text{m} = \text{A}$$

$$7\text{m} = \text{O}$$

$$10\text{m} = \text{D}$$

$$20\text{m} = \text{C}$$

$$5\text{m} = \text{S}$$

$$15\text{m} = \text{L}$$

REDUCING FRACTIONS – CLUE 3

In the grid below you will find a number of public statements that the police collected, however unfortunately only one of them is revealing a correct clue. Reduce the fractions to the lowest form in the list at the bottom of the page, and then look for your answer in the statement boxes and cross out that box (meaning that the statement in that box has been eliminated). The one statement box left standing after completing all of the questions, is the one with the correct clue!

Do you think that it is possible that the gremlins are hiding in the school? $\frac{3}{5}$	My sister said that she saw a gang of gremlins running with all of the graduation items towards Chuck's Car Yard. $\frac{7}{10}$	There has been some gossip around town that they are hiding in a medium sized place south of Mathhattan Elementary. $\frac{3}{4}$	I'd say they are probably also who are responsible for our poor Internet connection lately, have you check in with the Local IT Company? $\frac{1}{5}$
I think I saw a couple of gremlins hiding a stash of certificates in a place in the northern direction. $\frac{1}{2}$	I saw this medium place that would be great for hiding all of the items they took. $\frac{11}{20}$	They are probably lurking in one of those strange places in the south. $\frac{1}{10}$	I'm pretty sure the gremlins have been meddling with my computer every night! $\frac{1}{4}$
My guess is that the gremlins are probably hiding in a large place. $\frac{1}{100}$	I heard that gremlins are scared of the dark, so they wouldn't be hiding underground. $\frac{7}{100}$	My Aunt said that she spoke to a man who said that he saw a bunch of gremlins running with the graduation items west of Mathhattan. $\frac{9}{10}$	I wouldn't be surprised if they were colluding with Mrs Frumpy and in fact hiding in her basement! $\frac{2}{5}$
The gremlins must be hiding underground to not be easily noticed or found with all of the items. $\frac{1}{7}$	The gremlins must be hiding in a small place, because they like confined spaces. $\frac{3}{10}$	I'm pretty sure I saw a gremlin running into the local IT company. $\frac{2}{25}$	Rumor has it that the gremlins are probably using Slimewort's abandoned lair. $\frac{4}{5}$

$$\frac{10}{100} = \quad \frac{50}{100} = \quad \frac{6}{10} = \quad \frac{10}{1000} = \quad \frac{7}{10} =$$

$$\frac{8}{100} = \quad \frac{200}{1000} = \quad \frac{80}{100} = \quad \frac{550}{1000} = \quad \frac{30}{100} =$$

$$\frac{900}{1000} = \quad \frac{25}{100} = \quad \frac{750}{1000} = \quad \frac{40}{100} = \quad \frac{70}{1000} =$$

DIVISION – CLUE 4

Crack the code by completing the division questions below. Use your answers (including the remainders if any) to match and place the letters in the boxes to reveal the clue. 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!

Remainders

$229 \div 8 = \underline{28} \text{ r } \underline{5}$
G

$980 \div 2 = \underline{\quad} \text{ r } \underline{\quad}$
D

$451 \div 5 = \underline{\quad} \text{ r } \underline{\quad}$
R

$127 \div 8 = \underline{\quad} \text{ r } \underline{\quad}$
I

$635 \div 7 = \underline{\quad} \text{ r } \underline{\quad}$
A

$720 \div 6 = \underline{\quad} \text{ r } \underline{\quad}$
T

$323 \div 8 = \underline{\quad} \text{ r } \underline{\quad}$
O

$808 \div 4 = \underline{\quad} \text{ r } \underline{\quad}$
F

$661 \div 2 = \underline{\quad} \text{ r } \underline{\quad}$
H

$509 \div 9 = \underline{\quad} \text{ r } \underline{\quad}$
M

$750 \div 3 = \underline{\quad} \text{ r } \underline{\quad}$
E

$909 \div 3 = \underline{\quad} \text{ r } \underline{\quad}$
P

$616 \div 8 = \underline{\quad} \text{ r } \underline{\quad}$
U

$700 \div 2 = \underline{\quad} \text{ r } \underline{\quad}$
L

$763 \div 4 = \underline{\quad} \text{ r } \underline{\quad}$
W

$401 \div 2 = \underline{\quad} \text{ r } \underline{\quad}$
S

$392 \div 4 = \underline{\quad} \text{ r } \underline{\quad}$
N

G						
28 r 5	90 r 1	250	56 r 5	350	15 r 7	98

202	40 r 3	40 r 3	120	303	90 r 1	15 r 7	98	120	200 r 1

190 r 3	250	90 r 1	250

202	40 r 3	77	98	490

						G
330 r 1	250	90 r 5	490	15 r 7	98	28 r 5

200 r 1	40 r 3	77	120	330 r 1

ADDITION - CLUE 5

Discover clue 5 by correctly completing the addition algorithms below. Locate your answer at the bottom and see what letter it matches to write in the box. The first one has been done for you!

$$\begin{array}{r} 2,310 \\ + 2,225 \\ \hline 4,535 \end{array}$$

$$\begin{array}{r} 1,304 \\ + 2,102 \\ \hline \end{array}$$

$$\begin{array}{r} 5,632 \\ + 3,024 \\ \hline \end{array}$$

$$\begin{array}{r} 4,720 \\ + 1,320 \\ \hline \end{array}$$

$$\begin{array}{r} 1,980 \\ + 3,615 \\ \hline \end{array}$$

$$\begin{array}{r} 6,344 \\ + 1,311 \\ \hline \end{array}$$

$$\begin{array}{r} 1,089 \\ + 2,423 \\ \hline \end{array}$$

$$\begin{array}{r} 7,639 \\ + 270 \\ \hline \end{array}$$

$$\begin{array}{r} 4,782 \\ + 4,031 \\ \hline \end{array}$$

$$\begin{array}{r} 7,500 \\ + 1,098 \\ \hline \end{array}$$

$$\begin{array}{r} 3,661 \\ + 5,209 \\ \hline \end{array}$$

$$\begin{array}{r} 1,975 \\ + 1,499 \\ \hline \end{array}$$

$$\begin{array}{r} 8,179 \\ + 192 \\ \hline \end{array}$$

$$\begin{array}{r} 3,722 \\ + 4,356 \\ \hline \end{array}$$

$$\begin{array}{r} 2,999 \\ + 4,589 \\ \hline \end{array}$$

$$\begin{array}{r} 5,473 \\ + 2,308 \\ \hline \end{array}$$

$$\begin{array}{r} 7,684 \\ + 591 \\ \hline \end{array}$$

$$\begin{array}{r} 1,308 \\ + 3,485 \\ \hline \end{array}$$

$$\begin{array}{r} 1,076 \\ + 6,655 \\ \hline \end{array}$$

$$\begin{array}{r} 2,596 \\ + 445 \\ \hline \end{array}$$

$$\begin{array}{r} 3,250 \\ + 3,250 \\ \hline \end{array}$$

$$\begin{array}{r} 7,000 \\ + 2,000 \\ \hline \end{array}$$

$$\begin{array}{r} 6,118 \\ + 1,284 \\ \hline \end{array}$$

$$\begin{array}{r} 4,992 \\ + 2,164 \\ \hline \end{array}$$

$$\begin{array}{r} 4,050 \\ + 1,600 \\ \hline \end{array}$$

$$\begin{array}{r} 1,500 \\ + 1,500 \\ \hline \end{array}$$

$$\begin{array}{r} 1,683 \\ + 3,296 \\ \hline \end{array}$$

$$\begin{array}{r} 5,024 \\ + 2,416 \\ \hline \end{array}$$

$$\begin{array}{r} 1,095 \\ + 4,130 \\ \hline \end{array}$$

The answers are jumbled up below with a letter to help crack the code!

4,535 = T

3,406 = H

7,156 = T

7,402 = S

8,078 = E

7,588 = L

3,041 = F

7,655 = A

8,598 = U

5,650 = O

8,813 = M

7,781 = A

7,909 = E

8,371 = B

4,793 = G

6,040 = P

3,000 = R

3,512 = C

8,656 = E

6,500 = O

7,731 = E

5,225 = E

4,535 = T

4,979 = A

9,000 = R

3,474 = T

8,275 = R

7,440 = G

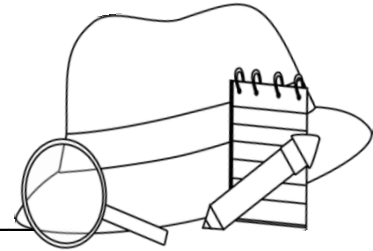
8,870 = S

5,595 = L

SOLVE THE MYSTERY: WHERE ARE THE GRADUATION GREMLINS HIDING?



Detective



(your name)

Has discovered that the Graduation Gremlins' Hideout is:

Clues Checklist:

Clue 1

Clue 2

Clue 3

Clue 4

Clue 5



Teacher to check and tick

Well done! You have found where the gremlins are hiding and recovered all of the graduation items!



Oops! No that is not where the gremlins are hiding. Try Again.