TRANSFORMATIONS

GROUP MEMBER NAMES:

LOCK	CODE
LOCK #1	EQUATION
LOCK #2	TRAPEZOID
LOCK #3	MATH
LOCK #4	ANGLES
LOCK #5	YEAR
LOCK #6	NYNNYY
LOCK #7	400
LOCK # 8	TTFT

TRANSFORMATIONS

ANSWER KEY AT A GLANCE

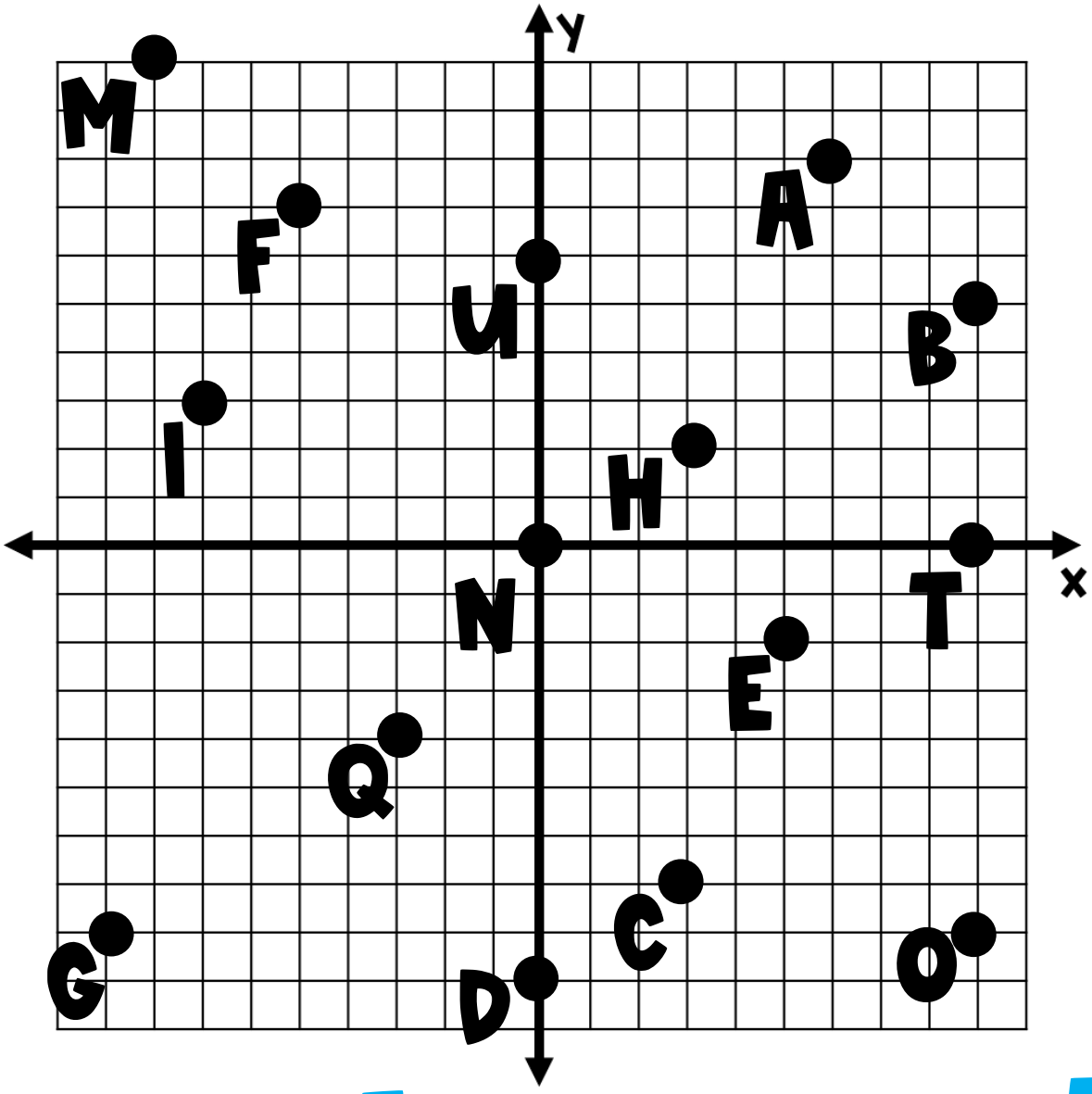
LOCK	CODE
LOCK #1	EQUATION
LOCK #2	TRAPEZOID
LOCK #3	MATH
LOCK #4	ANGLES
LOCK #5	YEAR
LOCK #6	NYNNYY
LOCK #7	400
LOCK #8	TTFT

LOCK #1: GRAPHING POINTS

IDENTIFY WHICH LETTER IS FOUND AT EACH OF THE ORDERED PAIRS LISTED. WHEN WRITTEN IN ORDER, THE LETTERS WILL CREATE A RECOGNIZABLE WORD THAT IS YOUR FIRST CODE.

ANSWER KEY

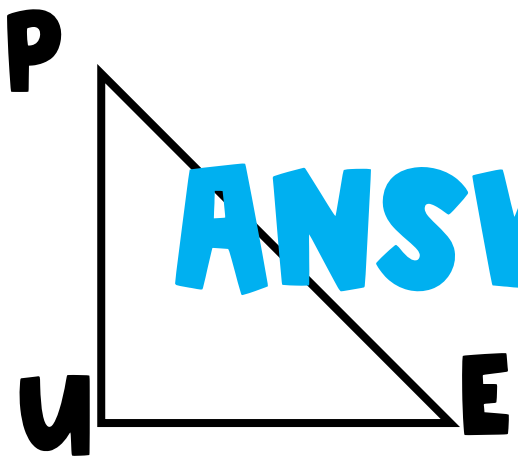
CODE: EQUATION

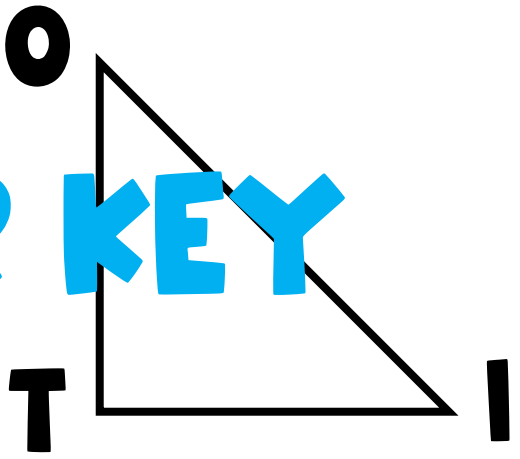


1. (5, -2): E
2. (-3, -4): Q
3. (0, 6): U
4. (6, 8): A
5. (9, 0): T
6. (-7, 3): I
7. (9, -8): O
8. (0, 0): N

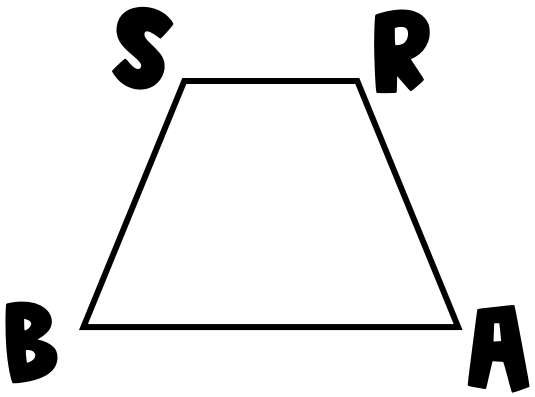
LOCK #2: CONGRUENT FIGURES

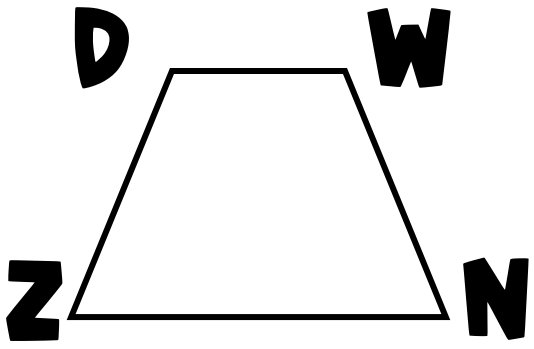
EACH SET OF SHAPES ARE CONGRUENT. FOR EACH SIDE OR ANGLE LISTED BELOW EACH BLANK, WRITE THE CORRESPONDING SIDE OR ANGLE TO DETERMINE WHICH SHOULD BE FILLED IN TO CREATE YOUR CODE.





ANSWER KEY





T	RA	PE	Z	OI	D
$\angle U$	WN	OI	$\angle B$	PE	$\angle S$

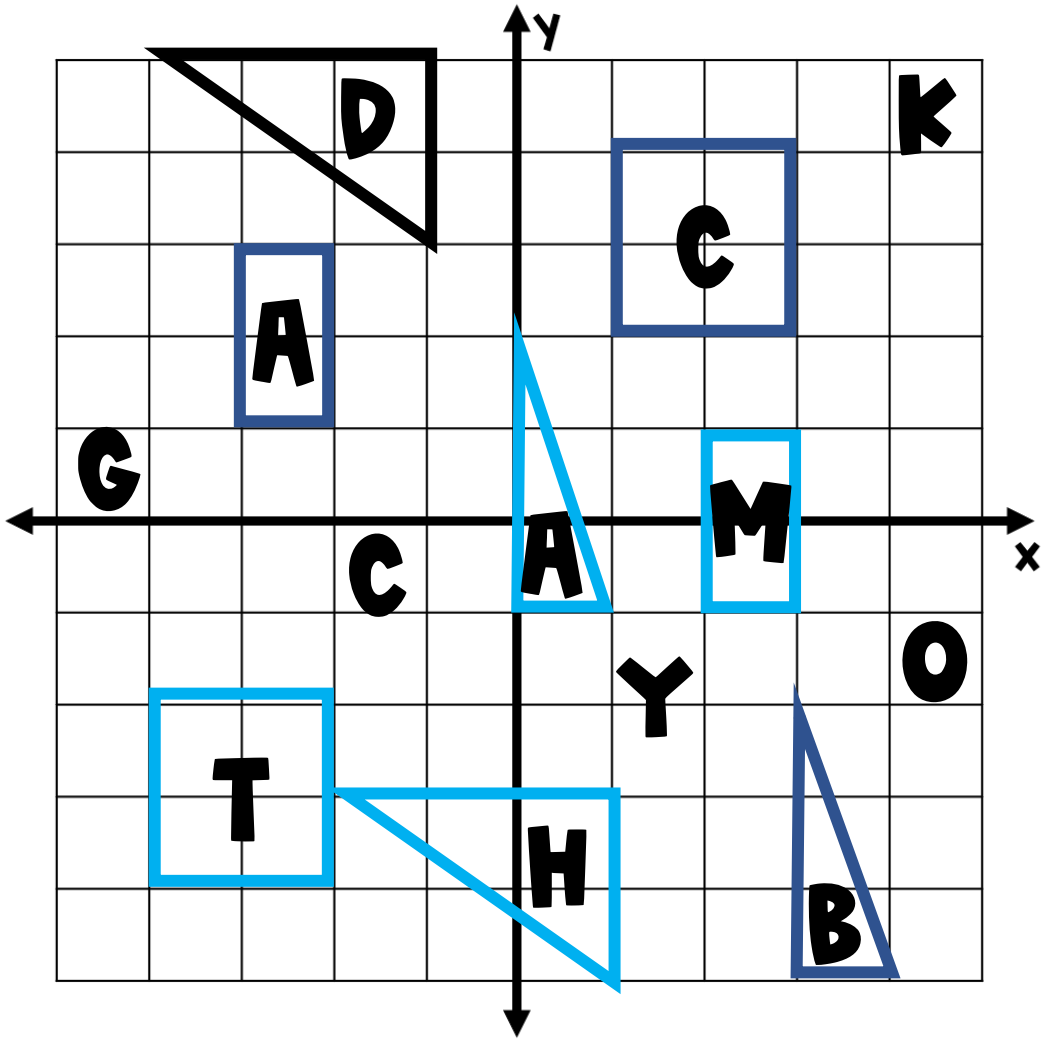
CODE: TRAPEZOID

LOCK #3: TRANSLATIONS

USE THE RULE TO TRANSLATE EACH SHAPE. IF DONE CORRECTLY, THE SHAPE SHOULD FRAME A LETTER THAT WILL CREATE A WORD FOR YOUR CODE!

ANSWER KEY

CODE: MATH



1. FIGURE A TRANSLATED WITH THE RULE (X + 5, Y - 2)
2. FIGURE B TRANSLATED WITH THE RULE (X - 3, Y + 4)
3. FIGURE C TRANSLATED WITH THE RULE (X - 5, Y - 6)
4. FIGURE D TRANSLATED WITH THE RULE (X + 2, Y - 8)

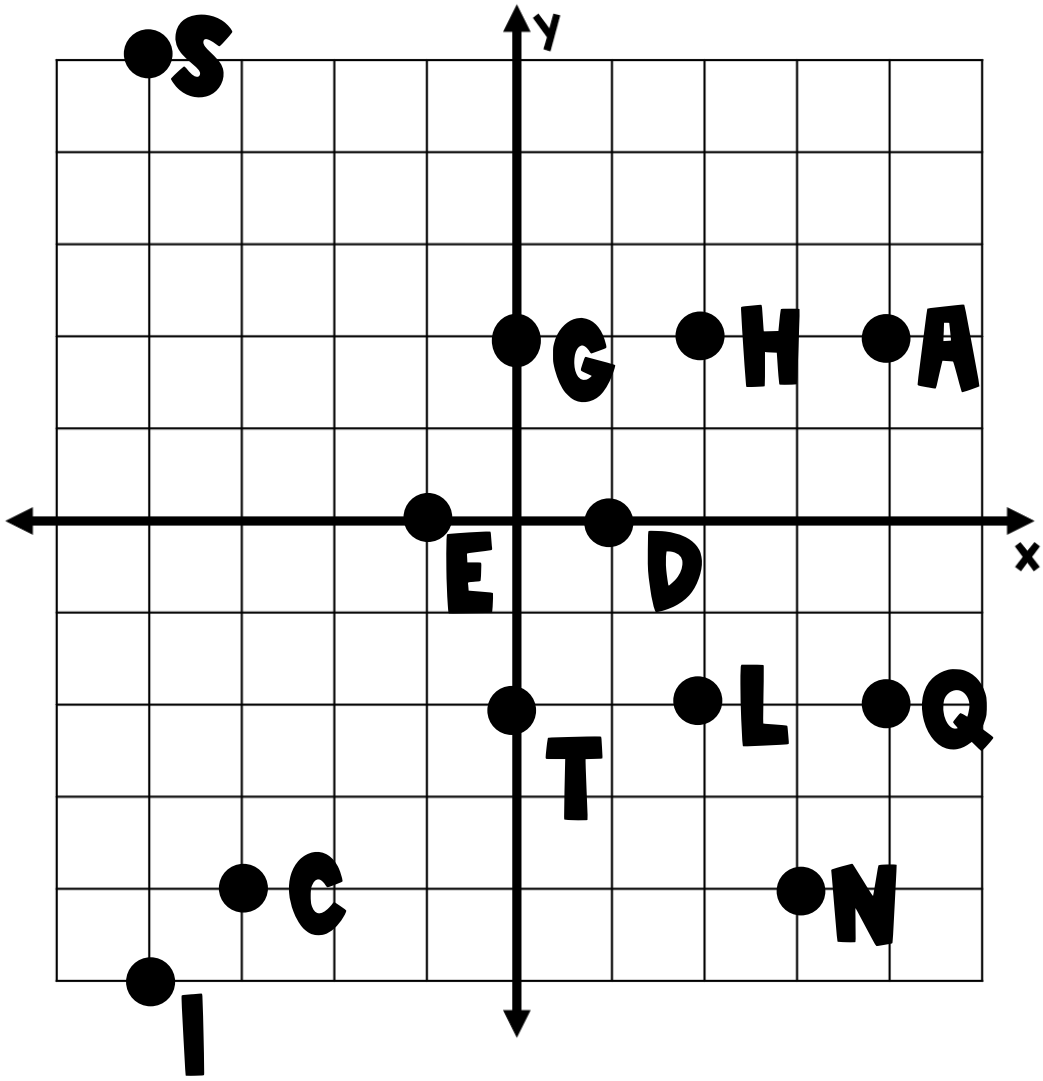
CODE: M A T H

LOCK #4: REFLECTIONS

USE THE RULE TO REFLECT EACH POINT ACROSS THE GIVEN AXIS. USE THE LETTER WITH THE REFLECTED POINT TO CREATE YOUR CODE.

ANSWER KEY

CODE: ANGLES



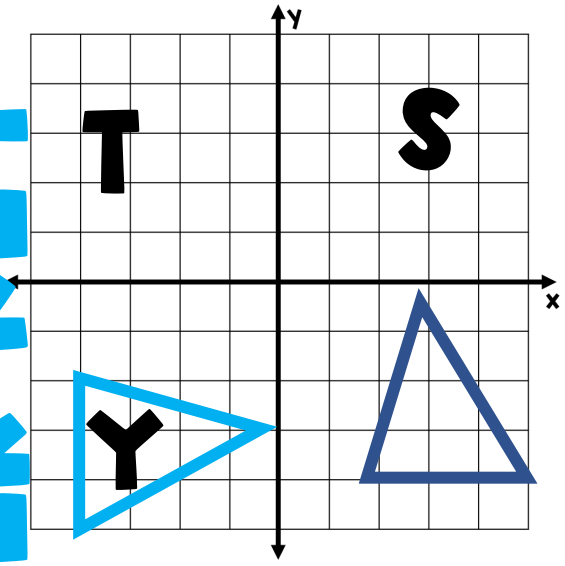
1. (4, -2) REFLECTED ACROSS THE X AXIS ___A___
2. (-3, -4): REFLECTED ACROSS THE Y AXIS ___N___
3. (0, 2): REFLECTED ACROSS THE Y AXIS ___G___
4. (2, 2): REFLECTED ACROSS THE X AXIS ___L___
5. (1, 0): REFLECTED ACROSS THE Y AXIS ___E___
6. (-4, -5): REFLECTED ACROSS THE X AXIS ___S___

LOCK #5: ROTATIONS

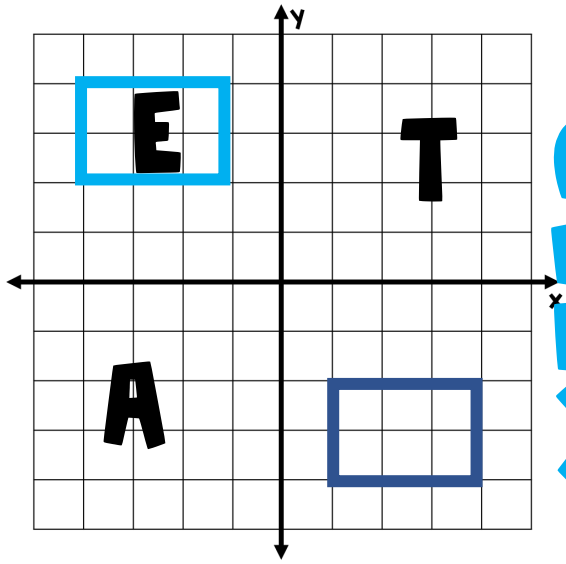
ROTATE THE FOLLOWING SHAPES ACCORDING TO THE DEGREES LISTED. THE ROTATED SHAPE WILL FRAME A LETTER THAT WILL CREATE YOUR FOUR DIGIT CODE.

ANSWER KEY

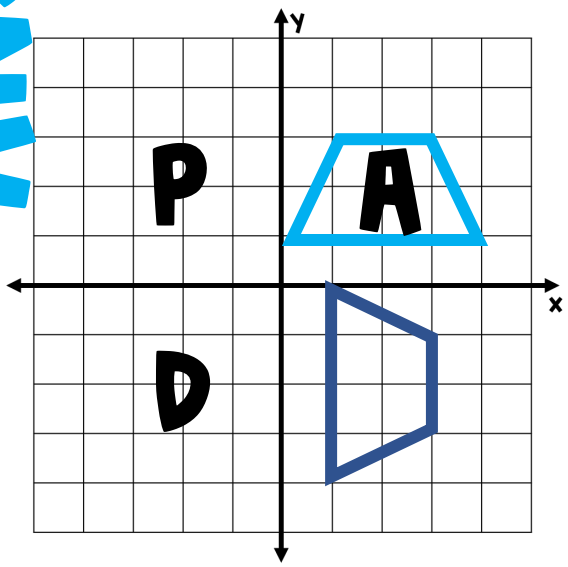
CODE: YEAR



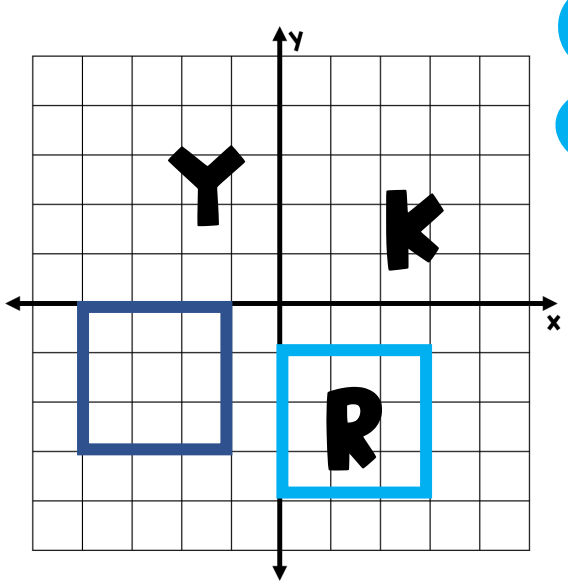
1. ROTATE THE SHAPE [illegible]0° DEGREES CLOCKWISE.



2. ROTATE THE SHAPE 180° DEGREES CLOCKWISE.



3. ROTATE THE SHAPE 90° DEGREES COUNTERCLOCKWISE.



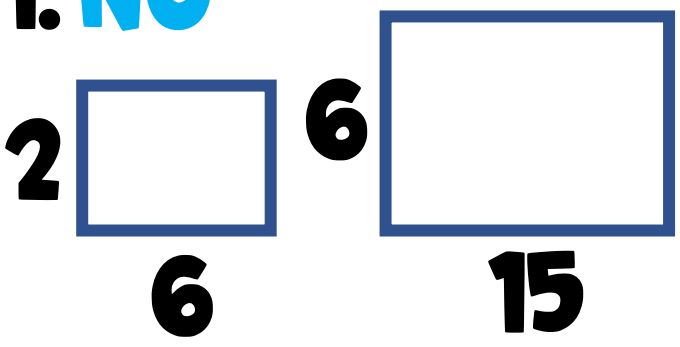
4. ROTATE THE SHAPE 270° DEGREES CLOCKWISE.

LOCK #6: ARE THEY SIMILAR?

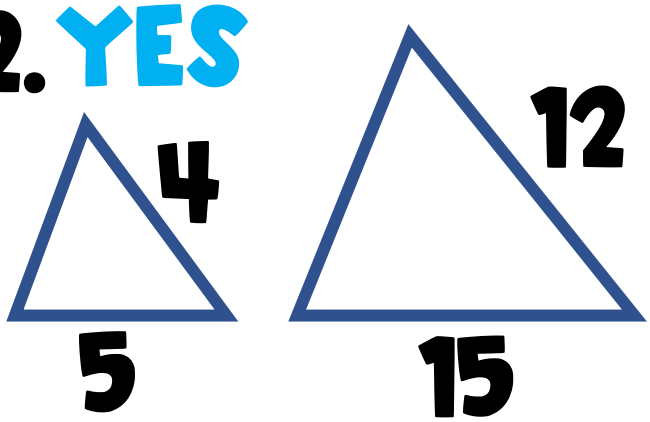
ANSWER KEY

DETERMINE IF THE FOLLOWING SETS OF SHAPES ARE SIMILAR BY SETTING UP A PROPORTION. IF THE SHAPES ARE SIMILAR, USE "Y" IN YOUR CODE. IF THEY ARE NOT SIMILAR, USE "N" IN YOUR CODE. YOUR CODE WILL BE A SERIES OF Y AND N LETTERS.

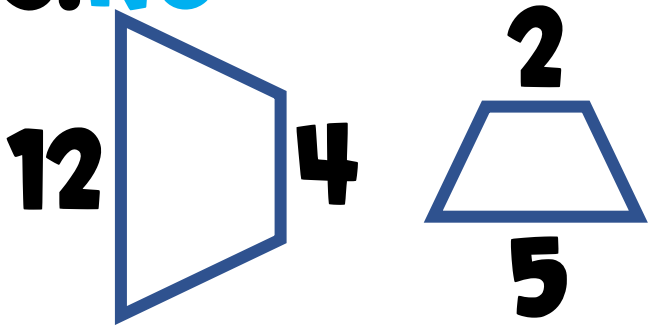
1. NO



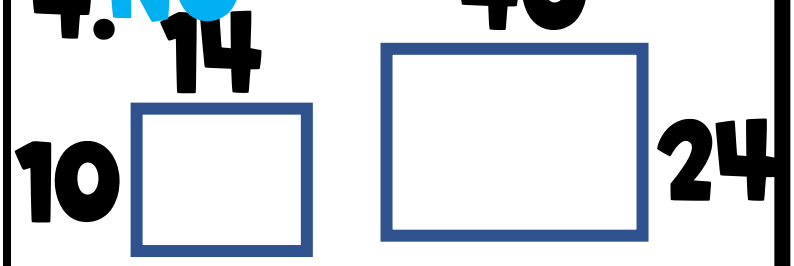
2. YES



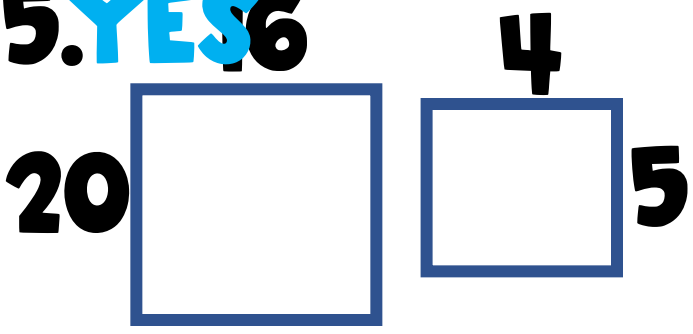
3. NO



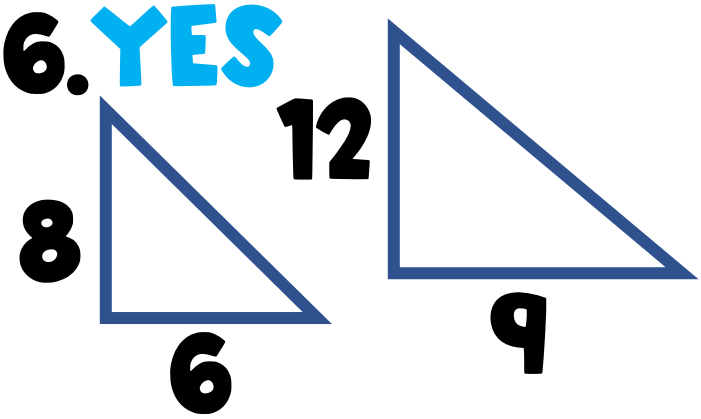
4. NO



5. YES



6. YES

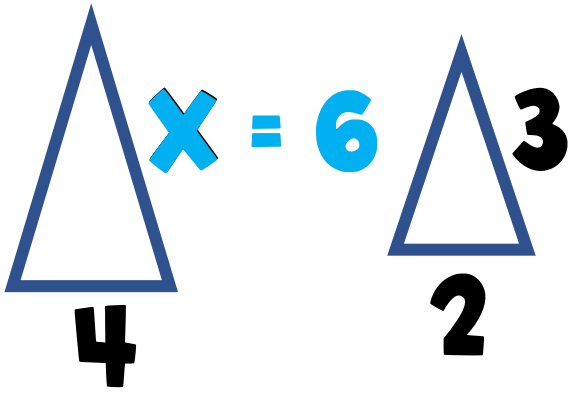


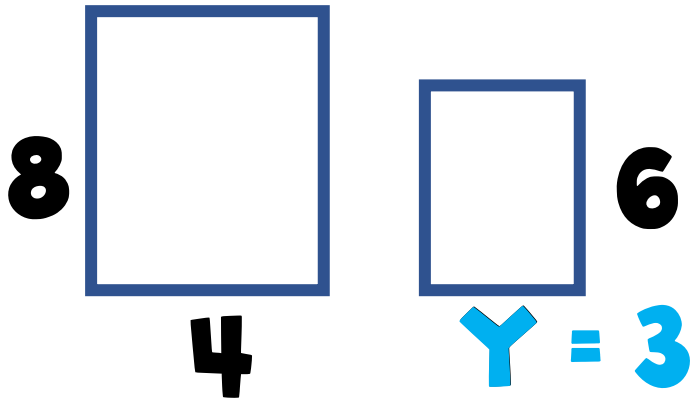
CODE: NYNNYY

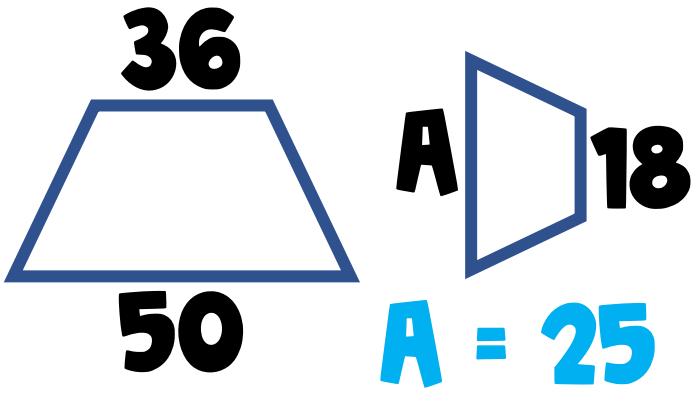
LOCK #7: SIMILAR FIGURES

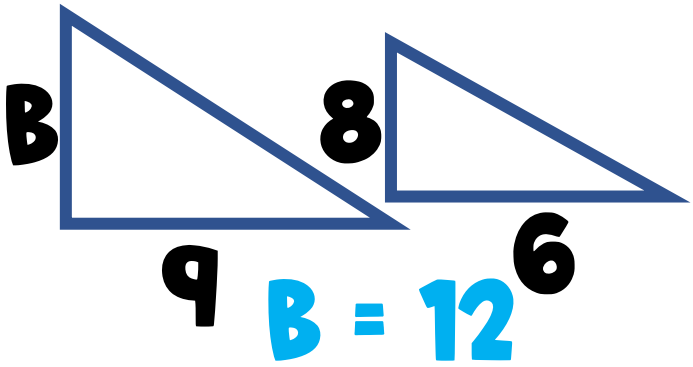
ANSWER KEY

THE FOLLOWING SHAPES ARE SIMILAR. USE PROPORTIONS TO FIND THE MISSING SIDE. THEN REPLACE THE VARIABLES WITH THEIR CORRESPONDING ANSWERS AND SOLVE THE EQUATION TO GET YOUR NUMERIC CODE.









CODE EQUATION:

$$\frac{25(12 + 6^2)}{3} = \frac{25(48)}{3} = \frac{1,200}{3}$$

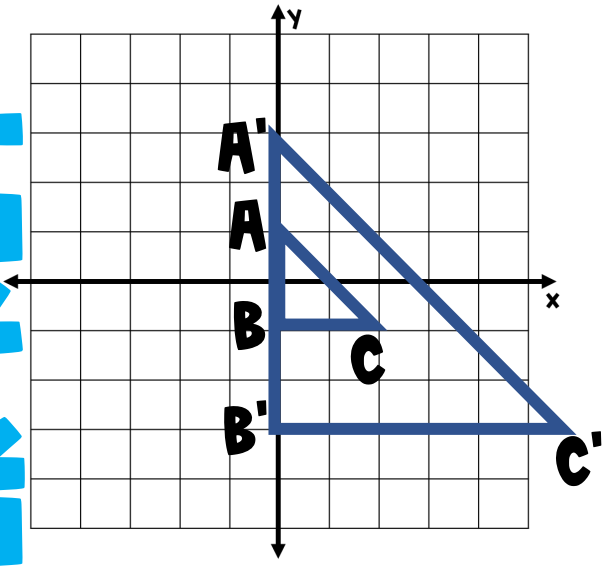
CODE = 400

LOCK #8: DILATIONS

DETERMINE IF THE FOLLOWING GRAPHS CORRECTLY SHOW EACH DILATION. IF THE DILATION IS CORRECT, USE THE LETTER T IN YOUR CODE (FOR TRUE). IF IT IS NOT CORRECT, USE THE LETTER F IN YOUR CODE (FOR FALSE).

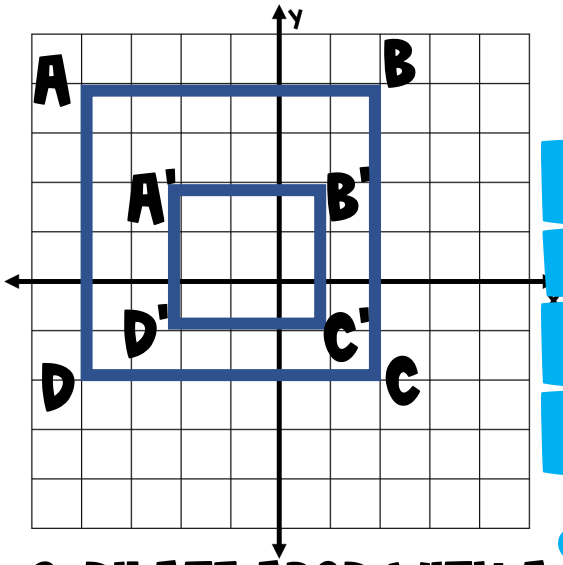
ANSWER KEY

CODE: TTFT



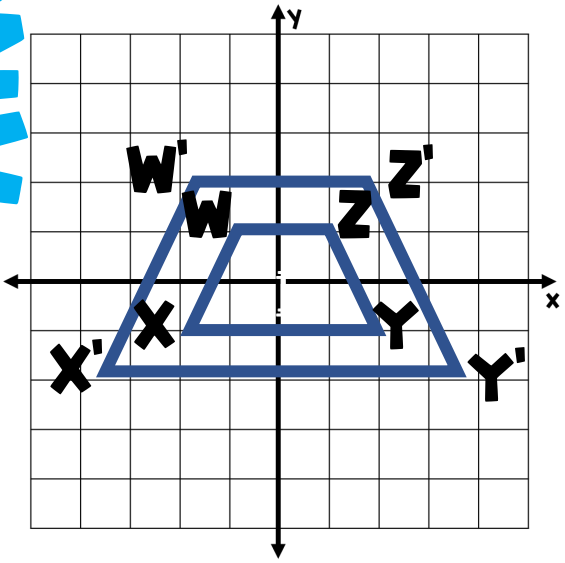
1. DILATE TRIANGLE ABC WITH A SCALE FACTOR OF 3.

(T) OR F



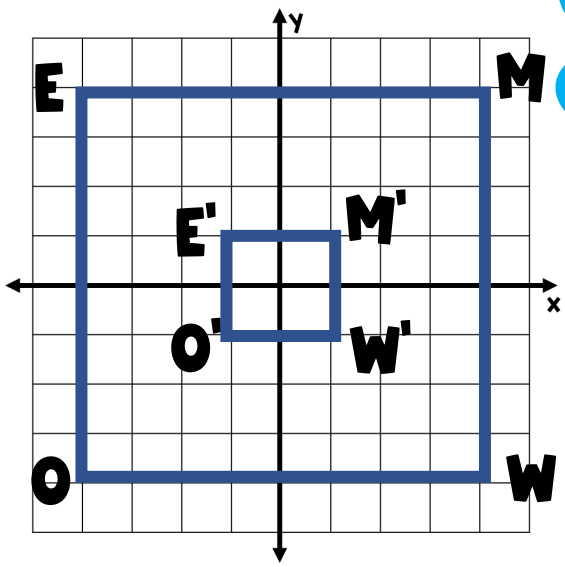
2. DILATE ABCD WITH A SCALE FACTOR OF .5

(T) OR F



3. DILATE WXYZ WITH A SCALE FACTOR OF 3.

T OR (F)



4. DILATE MEOW WITH A SCALE FACTOR OF .25.

(T) OR F