

Billy and Greta had a bowl of fruits.

- Lets play a spy game, - suggested Greta?

- Sure! How to play it? - asked Billy.

- I'll be giving you a cyphered note, and you need to figure out what do I mean, - explained Greta. - For example, I give you a note "F = O + A + P". It means that I have a bowl of fruits, and the fruits are oranges, apples and pears.

- Oh, I see, - nodded Billy, - Give me more secret notes and I'll decypher it!

F	-	O	=	A	+	P
---	---	---	---	---	---	---

Somebody ate all oranges. Now there are only apples and pears in the fruit bowl.

F	=		+		+	
---	---	--	---	--	---	--

There was a bowl with oranges, apples, and pears.

O	+		=		-	
---	---	--	---	--	---	--

Somebody ate all the apples. Now there are only oranges and pears in the fruit bowl.

O	+	A	=	F	-	P
---	---	---	---	---	---	---

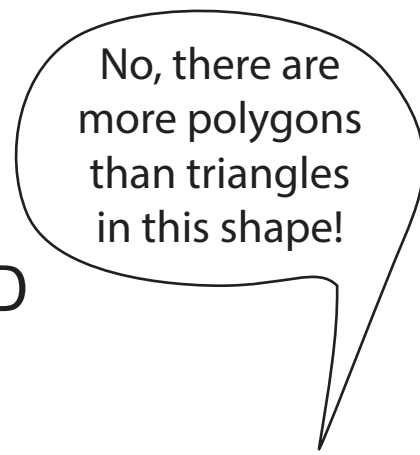
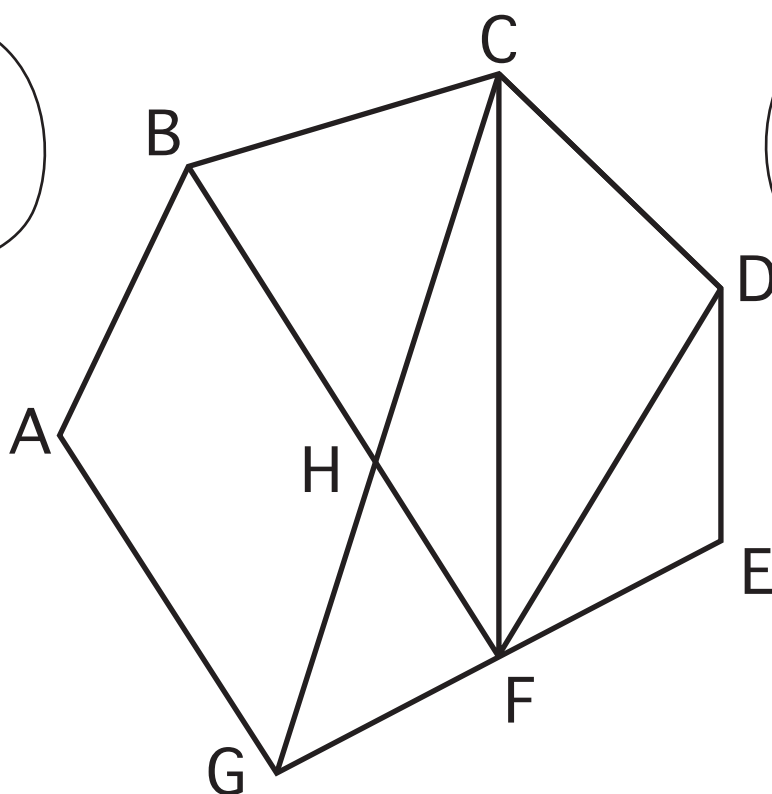
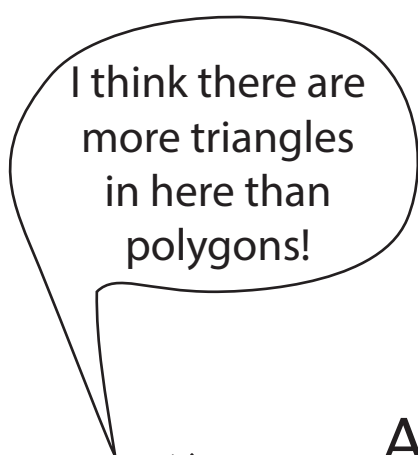
\_\_\_\_\_

A	=		-		-	
---	---	--	---	--	---	--

\_\_\_\_\_

\_\_\_\_\_

Polygon - a plain shape (two-dimensional) with straight sides.



How do you think who is right - Billy or Greta? Explain why do you think so.

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How many triangles are hidden in this shape? \_\_\_\_\_

Name all of them: \_\_\_\_\_

How many quadrilaterals are hidden in this shape? \_\_\_\_\_

Name all of them: \_\_\_\_\_

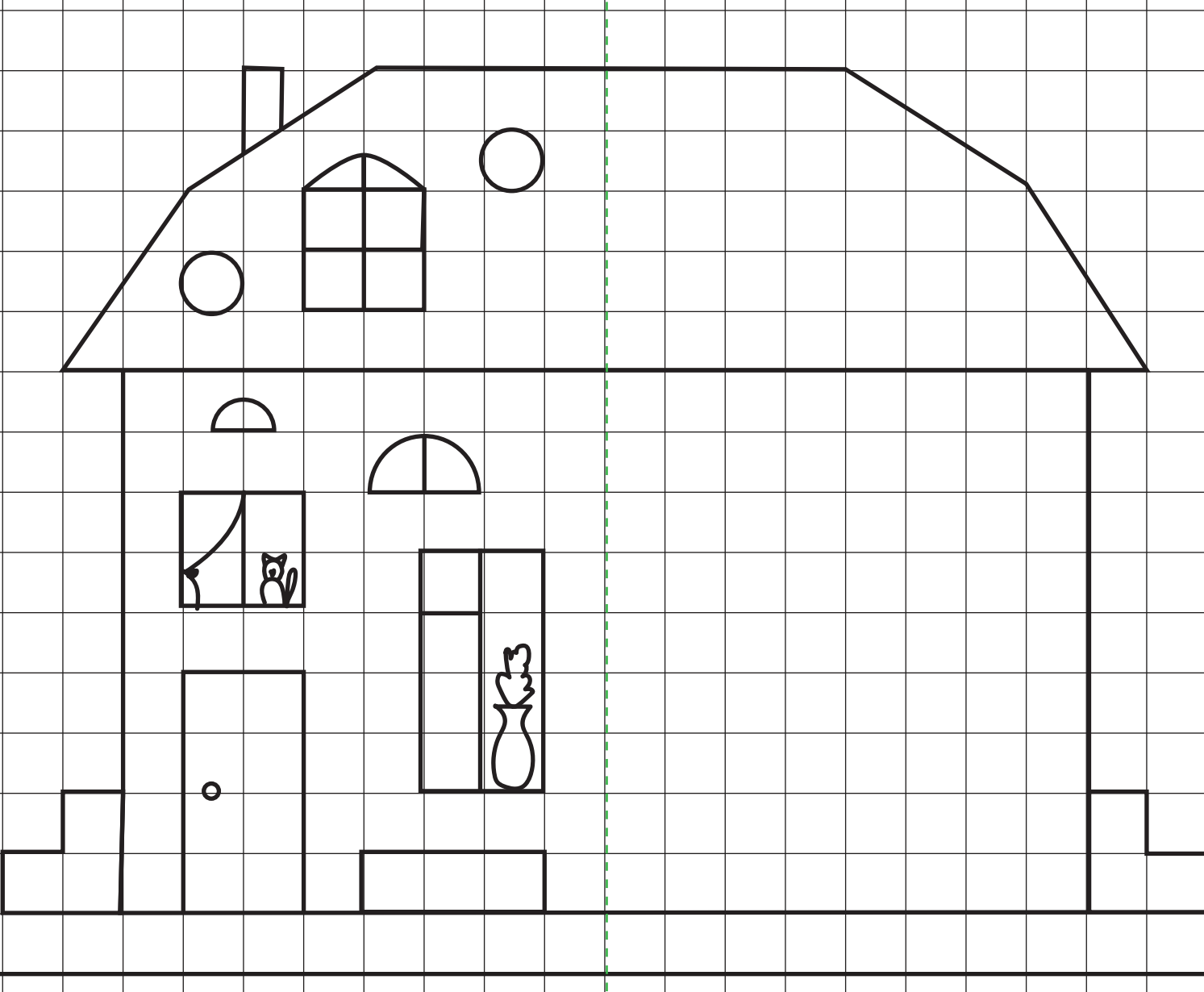
How many polygons with 5 sides you can find? \_\_\_\_\_

Name all of them: \_\_\_\_\_

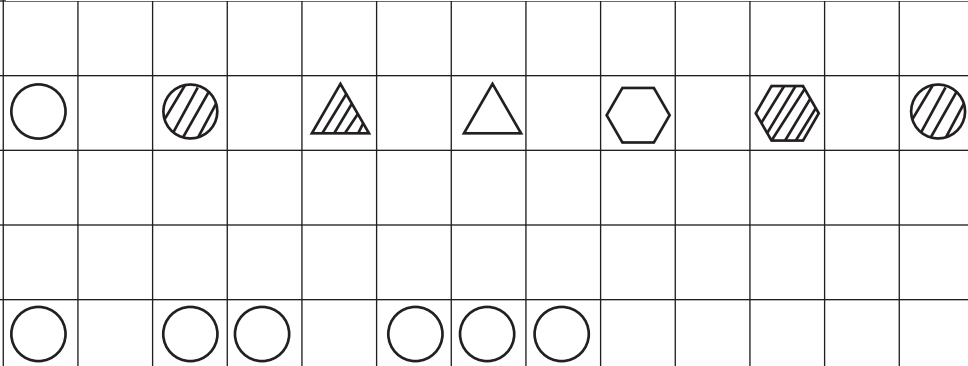
How many polygons with 6 sides you can find? \_\_\_\_\_

Name all of them: \_\_\_\_\_

Complete the drawing to make the house symmetrical

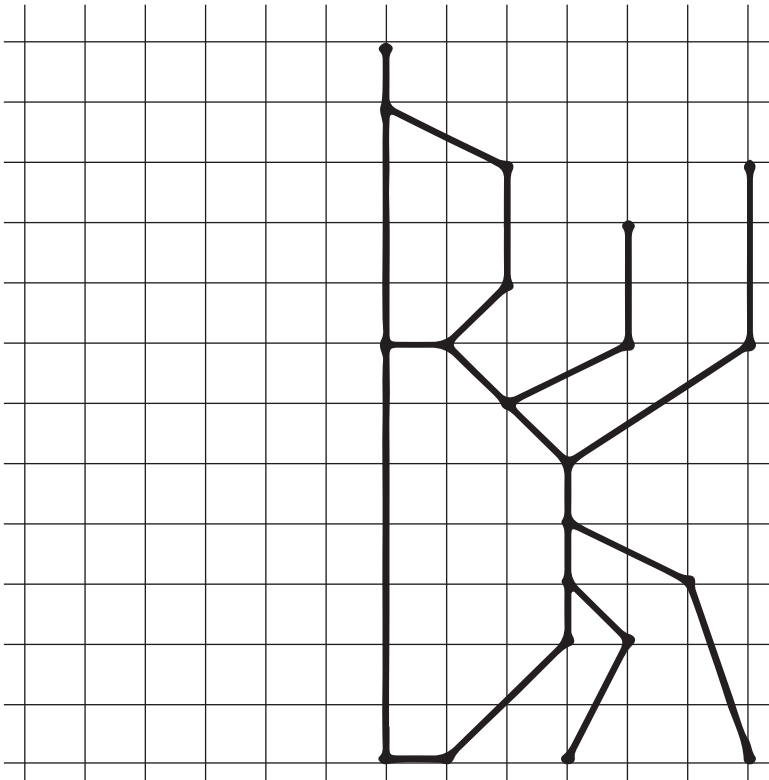
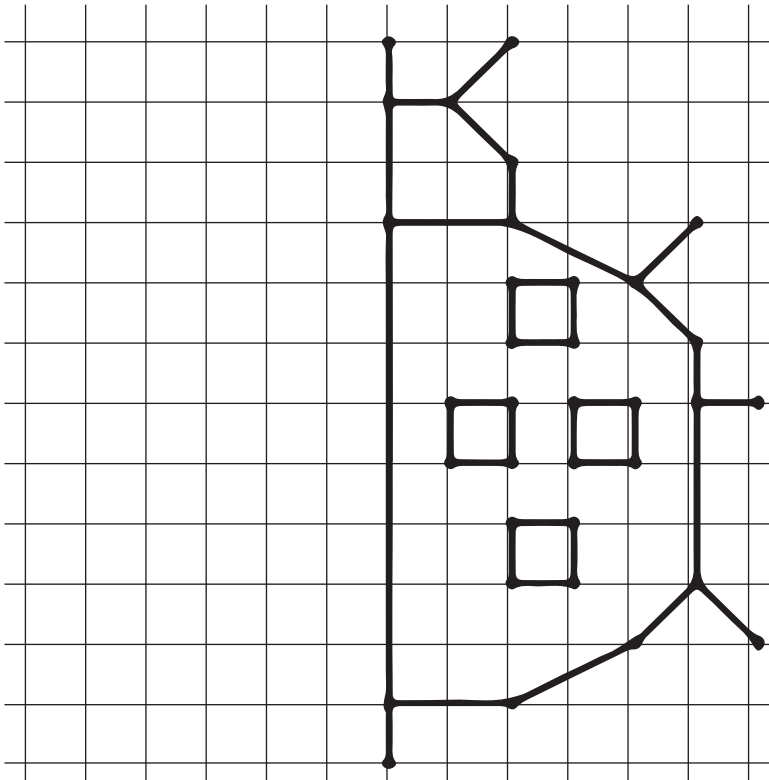


Finish the patterns




Finish the patterns


Make the bugs symmetrical





Calculate all, and color only bricks matching the sign each worker is holding



13

10+3=

7+6=


5+9=

11+2=

4+3=

9+4=

2+8=



17

5+7=

8+8=


9+8=

10+7=

11+6=

9+9=

4+5=



20

10+10=

1+19=


5+15=

6+9=

2+12=

11+5=

3+7=



15

5+8=

7+8=


10+5=

2+1=

8+9=

13+2=

6+3=



18

9+9=

13+5=

10+9=

2+6=

11+7=

9+3=

6+8=

0

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

10+6=

3+1=

12+4=

1+7=

13+6=

6+2=

5+5=

4+4=

13+3=

14+5=

7+7=

2+1=3

10+2=

5+2=

11+1=

7+2=

5+4=

10+5=

8+7=

6+1=

9+6=

5+6=

6+3=

9+2=

2+2=

5+4=

8+4=

17+2=

3+6=

10+4=

7+3=

4+3=

3+1=

6+4=

9+5=

7+5=

4+3=

2+3=

11+8=

3+2=

6+6=

4+1=

2, 6

3, 8, 16

5

7, 12, 19

9, 11, 15

4, 10, 14

([https://en.wikipedia.org/wiki/Bulls\\_and\\_Cows](https://en.wikipedia.org/wiki/Bulls_and_Cows))

On a sheet of paper, each player write a 3-digit secret number. The digits must be all different. Then, in turn, the players try to guess their opponent's number who gives the number of matches. If the matching digits are in their right positions, they are "bulls" (reffered as B), if in different positions, they are "cows" (reffered as C).

Find the correct digits combination for each column:

6	8	2	1 B	2	1	4	1 B	6	8	2	2 C	2	1	3	0 B 0 C
6	1	4	1 C	3	1	7	1 B	1	3	5	0 B 0 C	6	1	4	1 B 1 C
2	0	6	2 C	4	6	2	0 B 0 C	8	1	3	0 B 0 C	2	0	6	1 C
7	3	8	0 B 0 C	5	1	3	1 B 1 C	7	2	4	0 B 1 C	8	9	3	0 B 0 C
8	7	0	1 C	0	3	9	1 B	8	7	0	1 C	5	3	4	0 B 2 C
Code: <input type="text"/>	<input type="text"/>	<input type="text"/>	Code: <input type="text"/>	<input type="text"/>	<input type="text"/>	Code: <input type="text"/>	<input type="text"/>	<input type="text"/>	Code: <input type="text"/>	<input type="text"/>	<input type="text"/>				

Play this game with your parents, take notes how many guesses you made to guess the correct combination.

[illegible]

						B	C									B	C	
						B	C									B	C	
						B	C									B	C	
						B	C									B	C	
						B	C									B	C	
						B	C									B	C	
						B	C									B	C	
						B	C									B	C	
						B	C									B	C	
						B	C									B	C	
						B	C									B	C	
						B	C									B	C	

Play battleship game with your parents. Fill in the scoreboard, how many times you win.

You win	Parents win

Each player has two 7 x 7 grids, labelled along the sides with letters and numbers. On the left-hand grid the player secretly draws rectangles representing their fleet of ships: One 4-deck ship, two 3-deck ships, and three 2-deck ships. Ships cannot touch each other by side or corners.

Battleship



Destroyer




Patrol Boat





During the game the players take turns in making a shot at the opponent, by calling out the coordinates of a square (eg D5). The opponent responds with either "hit" if it hits a ship or "miss" otherwise. If it is a "hit" then player gets another turn. (rules may vary, but I prefer "gets another turn" rule) If the player has hit the last remaining square of a ship the opponent must announce the name of the ship, e.g., "You sank my battleship".

During the match each player should record their opponent's shots on the left-hand grid, and their on the right-hand grid as "X" if it is a hit or "." if it is a miss.

The first player to lose all their ships loses the game. If all ships of both players are sunk by the end of the round, the game is a draw.

# BATTLESHIPS

player \_\_\_\_\_

## YOUR SHIPS

7							
6							
5							
4							
3							
2							
1							
	A	B	C	D	E	F	G



hit



miss

## ENEMY SHIPS



7							
6							
5							
4							
3							
2							
1							
	A	B	C	D	E	F	G

Place your ships on the smaller grid, so that your opponent cannot see them.  
Remember, ships cannot touch each other neither by side nor by corner.  
Take turns, make "shots" by calling the coordinates.  
If it is a "hit" you get another move until you miss.  
First one to sink all enemy ships wins. If both players did it in the same round - it is a draw.



## Grid dictation (optional)

Classwork 21 Place the dot 5 from the bottom, 5 from the left.

1 ↗	2 ↑	2 ←	1 ↙	2 ↓	2 ↘	3 →	3 ↑
3 ↗	1 ↖	1 ↙	2 ←	2 ↖	2 ↑	2 ↗	2 →
1 ↘	1 ↗	1 ↖	2 ↑	2 ↗	2 →	2 ↘	2 ↓
1 ↙	4 ↘	1 ↓	1 ↙	4 ←	3 ↘	1 ↓	1 ←
1 ↘	1 ↓	1 ↙	7 ←	1 ↖			

Classwork 22 Place the dot 5 from the top, 5 from the left.

7 →	1 ↑	1 →	1 ↓	2 →	1 ↓	2 →	3 ↓
1 ↙	2 ←	1 ↙	3 ↓	1 →	1 ↓	4 ←	3 ↑
4 ←	1 ↙	1 ↓	1 →	1 ↓	4 ←	7 ↑	3 ↗

Something new =) Place the dot 6 from the top, 8 from the left.

2 →	1 ↑	2 ↗	4 →	1 ↘	1 ↓	4 ←	1 ↙
1 ↘	3 ↓	2 ↙	3 ↘	1 ↑	1 ↗	1 →	1 ↘
1 ↓	1 ↙	1 ←	2 ↓	10 ←	1 ↑	1 ↗	3 ↑
1 ↗	2 ↖	3 ↑	1 ↗	1 ↑	1 ↖	3 ←	1 ↑
1 ↗	3 →	2 ↘	2 ↓				