Greta and Billy looked around a noticed something interesting. To find out what they saw you need to draw the following line segments:
AK, DG, EB, HM, OF, AO, CK, BD, MG, FH, CE

C   E

K

A

O   F

B   .D

H

M   G

Finish the drawings such that the neighboring areas are not colored in the same color.
Using only three colors - red, green, and blue to color the first shape.
Continue coloring second and third shape using only red, green, blue, and yellow.
Example of neighboring and not neighboring areas:
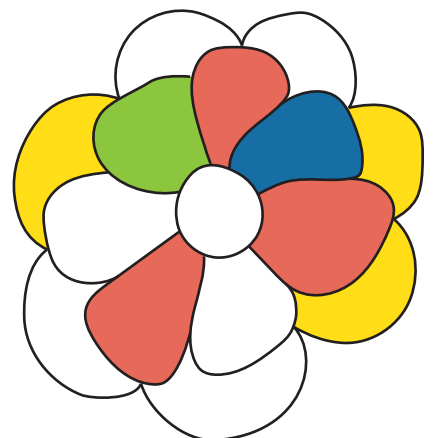
Use snapcubes of one color to build a column based on the left side of the expression, and cubes of another color to match the numbers on the right side. Compare the height of two towers and out an appropriate sign between expressions (<, >, or =). For example, 1+2 $\boxed{=}$ 4 - 1
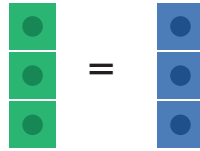
2 + 4 $\square$ 4 + 2   7 - 3 $\square$ 4 + 1   5 - 2 $\square$ 7 - 1

5 + 2 $\square$ 3 + 2   1 + 6 $\square$ 3 + 4   7 - 1 $\square$ 1 + 3

Solve and decode the word. Put letters according to their numerical order.

7 - 2 - 1 = $\square$ D   4 - 2 - 1 = $\square$ W   3 + 4 - 2 = $\square$ E

5 - 4 + 1 = $\square$ O   2 + 2 + 2 = $\square$ R   4 - 3 + 2 = $\square$ N

7 - 2 + 3 = $\square$ U   3 - 2 + 8 = $\square$ L   2 + 1 + 4 = $\square$ F

Dice addition game - play with your parents 10 rounds for each of the numbers. To play throw one dice and show on fingers how much you need to add to get **7, 8, 9.** Who shows the correct number of fingers faster wins. Fill in the table with P for parent wins, C for child wins

(So you will play 10 rounds trying to get 7 with the number on a dice, then 10 rounds adding up to 8, and 10 rounds making 9)
Example: child throws a dice and it is 5, so a child needs to show to fingers to add up to 7. Note: parents, do not try to win too hard :)

7										
8										
9										

Bulls and cows game

(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).

Example of a gameplay. Let's say player's number is 651. Then first guess has 1 B because 6 is correct number on the correct spot, and 0 cows - there is no more correct numbers on the wrong spot. Second guess is 1 B and 1 C - 6 is still on the correct spot and now we have a "cow" - 1 is the correct number on the wrong spot. Then 738 is a very helpful guess, now we can cross out these numbers from our potential numbers.

~~0~~ 1 ~~2~~ ~~3~~ ~~4~~ 5 6 ~~7~~ ~~8~~ 9

And finally we found all 3 Bulls - win!

| 6 8 2 | 1 B 0 C | | 2 0 6 | 0 B 1 C | | 2 0 4 | 0 B 0 C |
| 6 1 4 | 1 B 1 C | | 7 3 8 | 0 B 0 C | | 6 5 1 | 3 B |

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

	Game 1	Game 2	Game 3
	☐	☐	☐
	# of guesses	# of guesses	# of guesses

	1	2	3		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

					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.

Color in all triangles in yellow and all quadrilaterals in blue color.
(Quadrilateral is a four sides shape: quad means four, and lateral means sidev
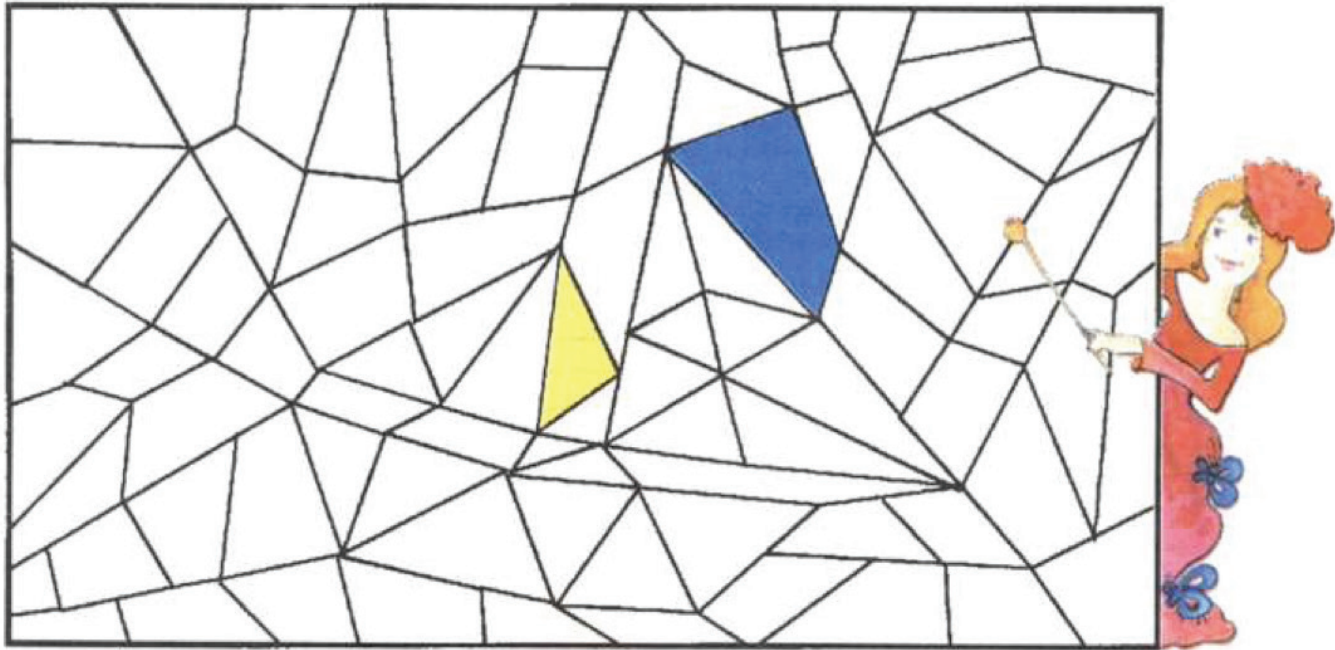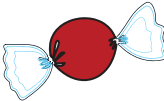

Each object below has a numeric value from 1 to 9. Can you figure out what number corresponds to each object? What will be the result of the last expression?

🍊 = 1

🍊 + 🍊 = 🍏

🧀 + 🧀 = 🍉

🍏 + 🍏 = 🚗

🍬 + 🍏 = 🍐

🚗 - 🍊 = 🧀

🍐 + 🍏 = 🍅

🧀 + 🍏 = 🍬

🍅 - 🍊 = 🥒

🍏 + 🍉 + 🍐 - 🥒 - 🍊 =

(Optional) Create your own simple line drawings and maybe we will be using your drawings in one of the next classes =)
Remember to keep them simple - we should be able to remember and copy it in 10 seconds.