

Intellectual Club

Welcome!



What awaits us?

Main Course

We brainstorm mathematical problems and learn how to solve them together. In each class, we aim to solve nine problems.

Jokes

After every three problems, we will have a puzzle/joke (disclaimer: they will be a little cheesy!)

Homework

Time to think independently by solving problems similar to those in class. Don't forget to send me your work!

Let's get started with our first task!



WHAT'S MISSING?

In the following diagram, two algebraic expressions are being changed or related to new forms following the same procedure or process. The arrows point to the new forms. One space is empty. Can you decide what the procedure is and what should go in the empty space? Why?

$$\begin{array}{ccc} 10x & \longrightarrow & 5(2x) \\ \hline -18x & \longrightarrow & ? \end{array}$$



Discuss in pairs...be ready to present!

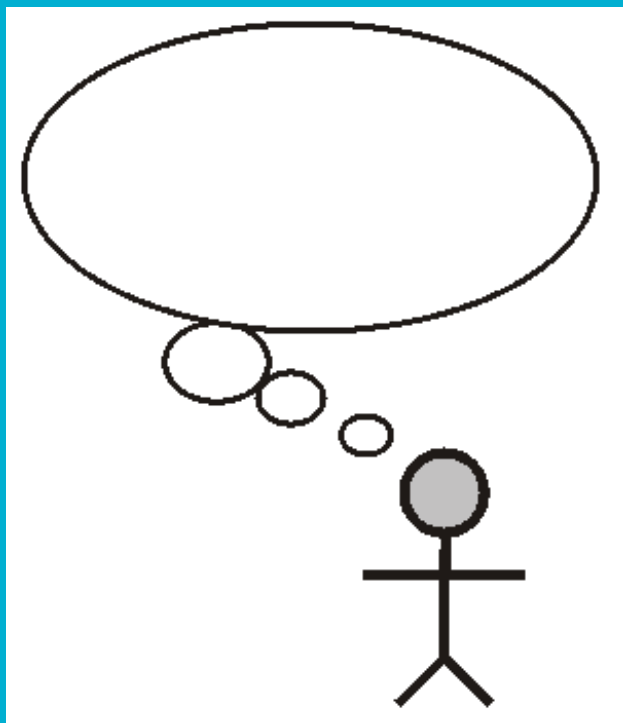
WHERE IS IT?

In the following set of nine items, find the one item that satisfied all of the clues given.

- It involves addition or subtraction.
- Its value is greater than -6.
- It is an inverse of an absolute value.

Which one is it?

$ 0 $	$ 2+3-7 $	$- 3-(-2) $
$- 3-9 $	$ -5 $	$(5) -1 $
$ (-2) + (-3) $	$- -5 $	$(-1) +5 $



Silent think time...then, we'll share!

THE PIZZA SHOP

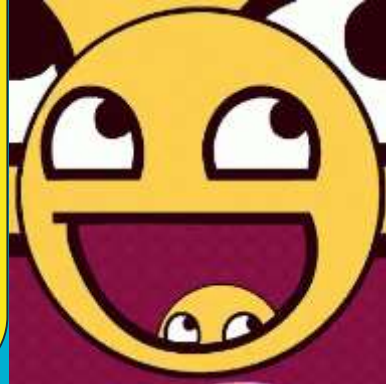
When eating lunch in a pizza shop, you and three friends sit at a circular table with four chairs. How many different ways can the four of you sit around the table?



JOKE TIME!

What did the triangle say to
the circle?

You're pointless!





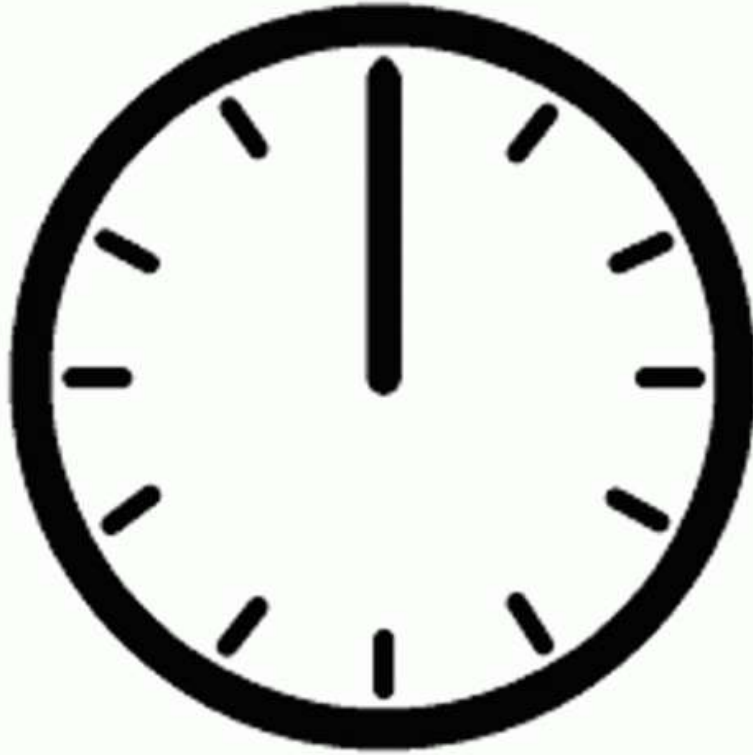
Challenge a friend – can they solve faster?

PATTERN EQUATION

Solve this pattern equation. If:

- $2 + 2 = 44$
- $3 + 3 = 96$
- $4 + 4 = 168$
- $5 + 5 = 2510$

Then what is $6 + 6$?



Speed round – you've got one minute to discuss!

FARMER and the SHEEP

A farmer has 23 sheep in this field. One day, a massive storm hits and all but eight of his sheep ran away. How many sheep does he have left?





Group huddle – get into pairs of three!

FREDDIE THE PAINTER

Freddie was given the task of painting number plates for 100 apartments. So, he had to paint all the numbers from 1 to 100. How many times did he have to paint the number 8?



JOKE TIME!

Which knight created the round table?

Sir Cumference!





Brainstorm together with a partner

SOCIAL MEDIA EQUATIONS

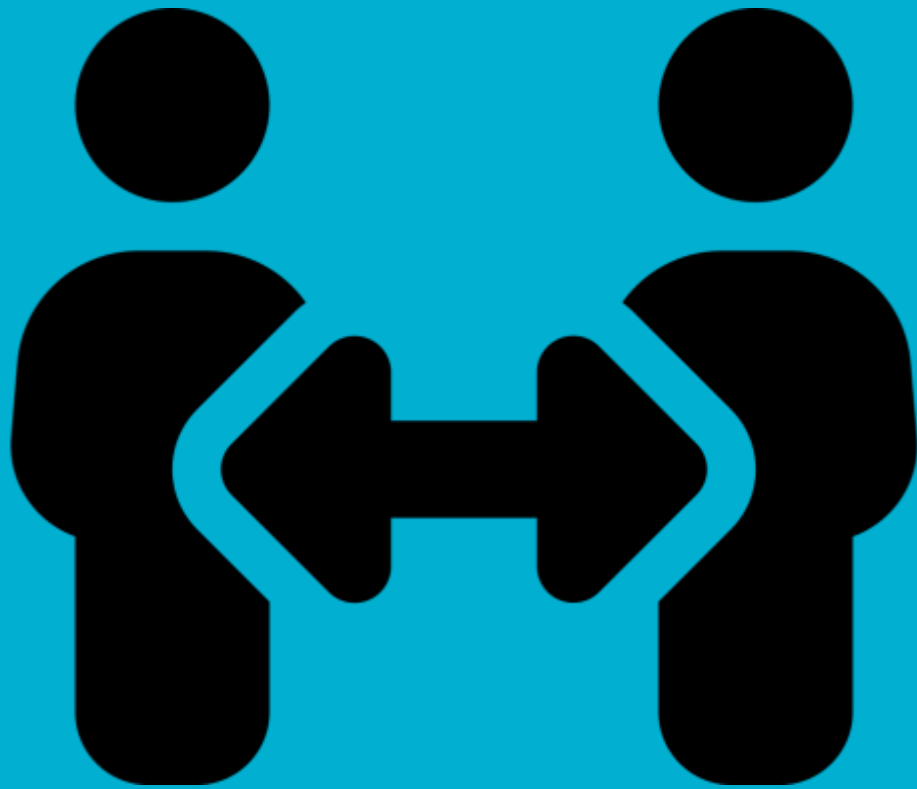
$$\text{Twitter} + \text{YouTube} = \text{Spotify}$$

$$8 = \text{Twitter} + \text{Twitter}$$

$$\text{Instagram} + \text{Instagram} + \text{Instagram} = \text{Spotify}$$

$$\text{YouTube} - \text{Twitter} = 1$$

$$\text{Instagram} + \text{Spotify} - \text{YouTube} = ?$$



Swap answers and compare!

SHELLEY'S JOURNEY



Shelley the tortoise is at the bottom of a 10-foot-tall hill. She can climb 4 feet per minute, but she can only climb for 1 minute before taking a break. She needs to rest for 30 seconds before starting again. Each time she stops, she slides back down $2\frac{1}{2}$ feet. How long will it take Shelley to climb the hill?



Mystery solver mode...put on your detective hats!

FIND THE LIAR

You've arrived in the city of Mysterville where two groups of people live. One group has only truth-tellers and one group has only liars. In this city, you meet Bip and Bop. Bip and Bop may both belong to the truth-telling group, may both belong to the lying group, or may be in different groups. Based on the statement below, is Bip a liar or a truth-teller?

Bip says, "We are both liars."

Panther says, "Bip cannot be a truth-teller, because then he would tell you he was a truth-teller. If you need more clues, just let me know and I'll help you out. You can always turn into the hint to seek help."

Hint: If Bip was a liar, would he tell you he was a liar?

JOKE TIME!

What did one math book say
to the other?

Don't bother me. I've got my own
problems!



End of class – well done!

Thank you for your participation.

I will send your homework right after this. Please submit it at least three days before the next class.

Don't hesitate to email me if you have any questions: gamzekazakoglu14@gmail.com