

# 40 Weeks of Math Challenges

## Week 37



These visual math challenges have been created to intrigue and inspire your children. They are designed to be hands on, open-ended inquiries, to challenge them to think deeply about the world around them.

Each week a new set will be released with four levels.

- Preschool
- Years 1/2 (approx. age 6-8)
- Year 3/4 (approx ages 8-10)
- Year 5/6 (approx. ages 10-12)

I hope you enjoy exploring the ideas with your children! The challenges don't require any special resources, however your children will need a 'Math Journal' to record their discoveries. Any notebook will work, but if you can, try to encourage them to use a Grid book.

You are welcome to freely print these cards for your family but please respect our creative copyright and link back to the original file on our web page to share with others. Thanks, Jo

# Negative Numbers

Definition:

## Numbers less than zero.

1. Something to think about... "Can you have less than nothing?" This was a question mathematicians wondered about. How could they show less than zero.
2. For this game you will need a rope and a deck of cards with all the picture cards removed.
3. One way to think about less than zero is by playing a game. Stretch a rope across the ground, this is zero. Start at the line.
4. Draw a card from a deck of cards if it is black move forward the number of steps shown on the card. If it is red move backward. Take turns, can you get back to zero?



## Challenge 37

1/2

# Negative Numbers

Definition:

## Numbers less than zero.

1. Look at the picture, what do you notice?
2. We planted some peas in a cup so we could watch the plants grow up and the roots grow down. We labeled 0 at where the ground would be.
3. Set up your own experiment like this one and graph the growth of your plant!





# Negative Numbers

Definition:

Numbers less than zero.

1. Look at the picture, what do you notice?
2. Why do you only see snow when the outside temperature is below zero degrees centigrade?
3. Have a look at an outdoor thermometer, what is the temperature today? Find out the lowest temperature for your area. Research where earth has the lowest temperatures and what they are.



# Negative Numbers

Definition:

Numbers less than zero.

1. When we talk about the elevation, or height, of land, we base that on sea level. This cliff face is higher than the sea, but in some parts of the world the land is actually lower than the level of the sea. We say that place is 'below sea level'
2. Lake Eyre has an elevation of  $-16\text{m}$ . Meaning it is  $16\text{m}$  below sea level.
3. Research places that are below sea level. In your math journal make a list showing the lowest places on earth!

