

Mathletics

Series F



THE AGE OF AUNT LIL



Rich Learning Task

Reasoning

The Age of Aunt Lil

What's the point of this task?

This task requires students to solve a fractions problem which is presented as a story with clues.

It involves finding the whole set from knowing part of a set. They have to deduce which part of the set it is by finding how many pieces there are in the whole.

Questions to facilitate the learning

- What are we trying to find out?
- What are the key pieces of information or clues?
- How many pieces was the cake cut into?

Curriculum connections

This task facilitates the key mathematical processes of problem solving, representing, reasoning, proving and communicating. Students have to reunitize (repackage) a unit fraction and part of a set in order to find a whole.

Scaffolding the learning

How was the cake cut? (We know that the cake was cut so that everyone could have one piece.) This means we need to find out how many people were at the party in total.

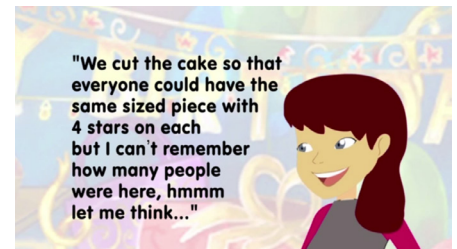
Extending the learning

Rewrite the story by changing the amount of stars and guests. Can someone else solve it?

Solution

To find out how many pieces the cake was cut into, we need to work out the total number of people at the party.

We know that 1 guest hid behind the sofa and 2 guests hid behind the curtains (3 people) then Aunt Lil arrived with a friend (2 more people). So the total number of guests so far is 5. And we mustn't forget Mum! This means the total number of people at the party was 6, and so the cake was cut into six equal parts. If there were 4 stars on each piece then there were 24 stars on the whole cake. So Aunt Lil is 24.



The Age of Aunt Lil

This is my Aunt Lil. Her favourite colour is purple. She rides a scooter and she loves stars. When she was younger she used to have green hair and play lead guitar in a band.

I know most things about Aunt Lil except that I do not know her age.

Every year I ask her and every year she says the same thing:

"How old are you?"

"One year older than last year and two years older than the year before that."

Then one day I had my chance to work it out!

Mum threw her a surprise birthday party while I was away at summer camp. When I returned I saw that Aunt Lil had left me this note.

Hey Jess,
The party was fun even though we missed you. Your mom made me a purple birthday cake with stars instead of candles. We saved you the last piece. Enjoy!
Aunt L

I saw one piece of cake with four stars on it. I asked my mum how many pieces of cake there were to begin with and this is what she said:

"We cut the cake so that everyone could have the same sized piece with 4 stars on each but I can't remember how many people were here, hmmm let me think..."

One guest hid behind the sofa. Another 2 guests hid behind the curtains.

Then Aunt Lil arrived with a friend. Everyone had a piece except for me. I left my piece for you."



Help Jess work out how old her Aunt Lil is.

Show what her cake looked like.

Explain your thinking.

Name _____

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