

# Mathematical challenges for able pupils

## Year 2 E Securing number facts, relationships and calculating



# At the toy shop

The toy shop stocks tricycles and go-carts.

The tricycles have 3 wheels.

The cars have 5 wheels (4 wheels and a steering wheel!).

Suna counted the wheels.  
He counted 37 altogether.  
How many tricycles are there?  
How many cars?  
Find two ways to do it.



## Learning Objective:

- Solve mathematical problems or puzzles.
- Recognise multiples of 3 and 5.
- Add mentally a pair of two-digit numbers.

# Solution for At the toyshop

**There are 9 tricycles and 2 go-carts**

or

**4 tricycles and 5 go-carts.**

## Learning Objective:

- Solve mathematical problems or puzzles.
- Recognise multiples of 3 and 5.
- Add mentally a pair of two-digit numbers.

# Birthdays

Mum and Paul are talking about birthdays.

They take Paul's age and double it.

Then they add 5.

The answer is 35.

Mum says this is her age.

How old is Paul?



## Learning Objective:

- Solve mathematical problems or puzzles.
- Use known number facts to add mentally.
- Carry out simple multiplication.

# Birthdays

Make up more problems like this.

Try to use some of these words:

**double**   **halve**   **add**   **subtract**

## Learning Objective:

- Solve mathematical problems or puzzles.
- Use known number facts to add mentally.
- Carry out simple multiplication.

# Solution to Birthdays

**Answer: Paul is 15.**

Most pupils will guess then try to improve.

For example, try 10:

$$10 \times 2 = 20 \quad 20 + 5 = 25 \text{ too small}$$

## Learning Objective:

- Solve mathematical problems or puzzles.
- Use known number facts to add mentally.
- Carry out simple multiplication.

***Thank You***

The background is a smooth gradient of blue, transitioning from a darker shade on the left to a lighter, cyan shade on the right. At the bottom, there are several overlapping, wavy bands. The topmost band is a bright yellow, followed by a light blue band, and then a white band at the very bottom. The overall effect is clean and modern.

# References and additional resources.

These units were organised using advice given at:

[http://www.edu.dudley.gov.uk/numeracy/problem\\_solving/Challenges%20and%20Blocks.doc](http://www.edu.dudley.gov.uk/numeracy/problem_solving/Challenges%20and%20Blocks.doc)

**PowerPoint template published by [www.ksosoft.com](http://www.ksosoft.com)**

These Mental Maths challenges can be found as a PDF file at :

[http://www.edu.dudley.gov.uk/numeracy/problem\\_solving/Mathematical%20Challenges%20Book.pdf](http://www.edu.dudley.gov.uk/numeracy/problem_solving/Mathematical%20Challenges%20Book.pdf)

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Mathematical challenges for able pupils in Key Stages 1 and 2

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