

**Mathematical challenges  
for able pupils**

**Year 3 C Handling data and  
measures**



# Treasure hunt

Jed and Jake are pirates.

Between them they have three precious jewels:  
a ruby (R), a diamond (D) and an emerald (E).

Complete the table.

Show what jewels each pirate could have.

Jed	R							
Jake	E	D						



## Learning Objective:

- Solve a given problem by organising and interpreting data in a simple table.
- Explain methods and reasoning.

# Treasure hunt

Jed	(R)	(D)	(E)	(R) (D)	(R) (E)	(E) (D)	(R) (E) (D)	
Jake	(E) (D)	(E) (R)	(D) (R)	(E)	(D)	(R)	(E) (D) (R)	



## Learning Objective:

- Solve a given problem by organising and interpreting data in a simple table.
- Explain methods and reasoning.

# Nick-names

Dawn, Mark, Josh and Tina are friends.

They each have a nick-name.

Their nick-names are Spider, Curly, Ace and Fudgy, but not in that order.

What is the nick-name of each of the friends?

## Clues

- Josh plays tennis with Curly and goes swimming with Ace.
- Tina has been on holiday with Curly but travels to school with Fudgy.
- Spider, Curly and Dawn play in the football team.
- Spider sometimes goes to tea with Josh.



### Learning Objective:

- Solve mathematical problems or puzzles.
- Solve a problem by organising information in a table.
- Explain methods and reasoning.

# Solution to nick-names

**Dawn is Ace.**

**Mark is Curly.**

**Josh is Fudgy.**

**Tina is Spider.**



## Learning Objective:

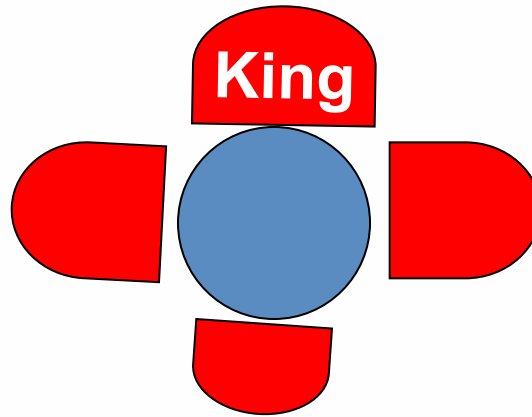
- Solve mathematical problems or puzzles.
- Solve a problem by organising information in a table.
- Explain methods and reasoning.

# King Arnold

King Arnold sits at a Round Table.

There are 3 empty seats.

**In how many different ways can 3 knights sit in them?**



## Learning Objective:

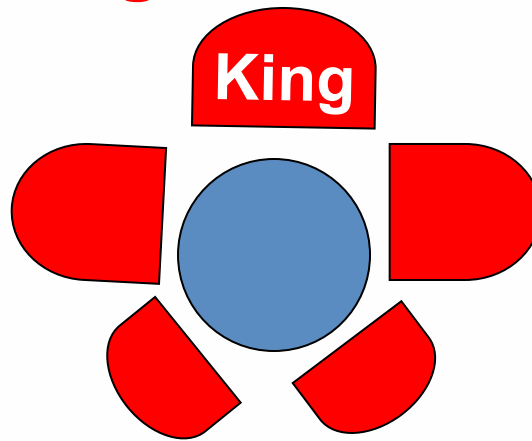
- Solve mathematical problems or puzzles.
- Solve a problem by organising information.
- Explain methods and reasoning.

# King Arnold

King Arnold sits at a Round Table.

There are 4 empty seats.

**In how many different ways can  
4 knights sit in them?**



## Learning Objective:

- Solve mathematical problems or puzzles.
- Solve a problem by organising information.
- Explain methods and reasoning.

# King Arnold

Three knights can sit with King Arnold in **6 different ways.**

Four knights can sit with King Arnold in **24 different ways.**



## Learning Objective:

- Solve mathematical problems or puzzles.
- Solve a problem by organising information.
- Explain methods and reasoning.



**The end, thank you!**



# References and additional resources.

The questions from this PowerPoint came from:

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# Thank You

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[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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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)

