

**Mathematical challenges
for able pupils**

**Year 5 D Calculating, measuring
and understanding shape**



Franco's fast food

This is what food costs at Franco's café.

1 burger and 1 tea cost £4.

2 burgers and 2 cakes cost £9.

1 cake and 2 teas cost £2.



**What do you have to pay in total for
1 burger, 1 cake and 1 tea?**

What does each item cost on its own?



Learning Objective:

- Solve mathematical problems or puzzles.
- Explain methods and reasoning.

Solution to Franco's fast food

A burger costs £3.50, a cake costs £1 and a tea costs 50p.

So the total cost of a burger, a cake and a tea is £5.

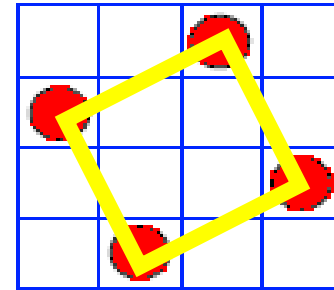
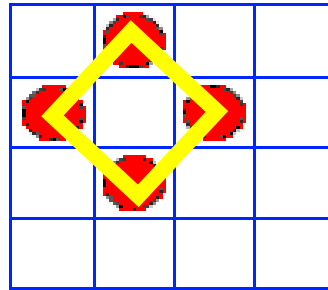
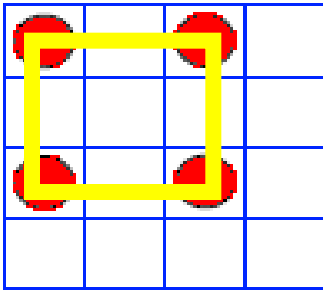


Learning Objective:

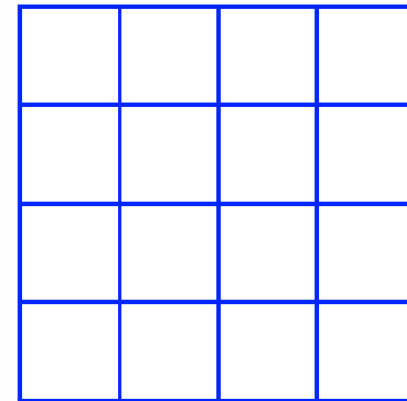
- Solve mathematical problems or puzzles.
- Explain methods and reasoning.

All square

On each of these grids, the counters lie at the four corners of a square.



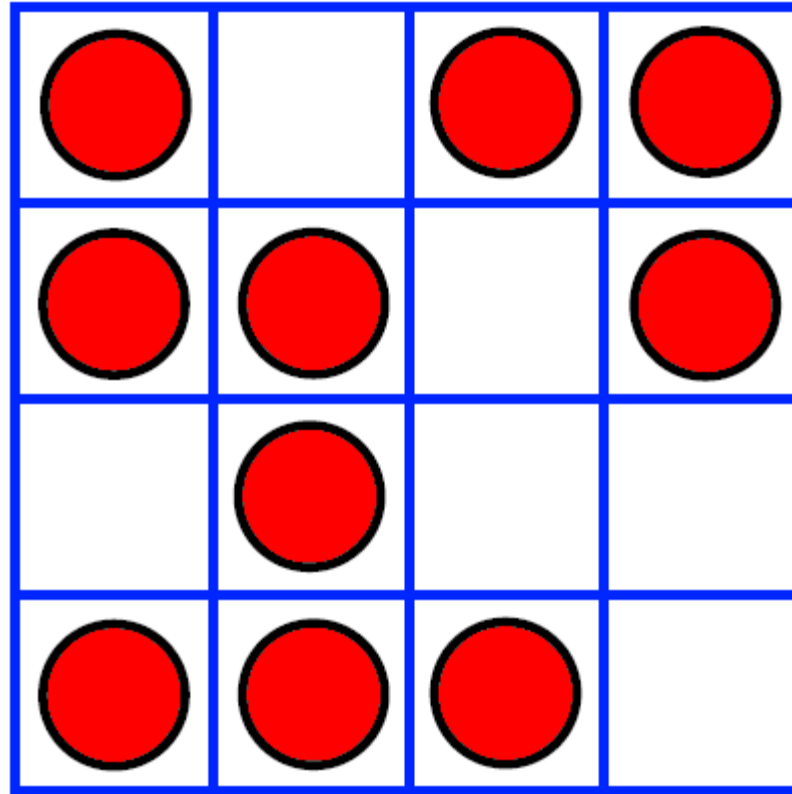
What is the greatest number of counters you can place on this 4 x 4 grid without four of the counters lying at the corners of a square?



Learning Objective:

- Solve a problem by extracting and interpreting data.
- Add several numbers mentally.

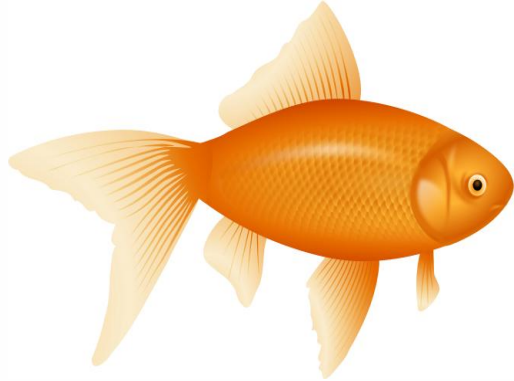
Solution to All square
**An example. Could you add
more counters than this?**



Learning Objective:

- Solve a problem by extracting and interpreting data.
- Add several numbers mentally.

A bit fishy



A goldfish costs £1.80.
An angel fish costs £1.40.



Nasreen paid exactly £20 for some fish.

How many of each kind did she buy?



Learning Objective:

- Solve problems involving ratio and proportion.
- Choose and use efficient calculation strategies to solve a problem.
- Explain methods and reasoning.

Solution to A bit fishy

Nasreen bought **4 angel fish**
and **8 goldfish**.



Learning Objective:

- Solve problems involving ratio and proportion.
- Choose and use efficient calculation strategies to solve a problem.
- Explain methods and reasoning.

The end, thank you!



References and additional resources.

The questions from this PowerPoint came from:

Mathematical challenges for able pupils in Key Stages 1 and 2

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Thank You

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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

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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

