

Parent notes

Stick with Maths puzzles

General guidance for parents/carers doing the Stick with Maths puzzles (Yrs 3-4, children aged 7-9).

These puzzles are intended to be fun challenges to develop children’s awareness of Maths in the real world. You can help them build positive attitudes by:

- Showing enthusiasm
- Reinforcing that making mistakes is part of learning
- Asking questions such as ‘Why do you think that?’ ‘What if we try this?’
- Praise effort rather than just a successful answer
- Encourage them to keep trying to develop resilience and perseverance
- Talk about real life scenarios highlighting the importance of Maths and how maths we use it
- Value their thinking ‘That’s a really good idea’ or ‘I like the way you thought about that’
- Talk about the values football players have: ‘Sometimes things are hard but that’s when we learn most’ or ‘we don’t know it ...yet!’
- Allow them to be the ‘teacher’ – this will build their self-esteem and confidence
- Talk about your own thinking process if they struggle
- Above all, have fun together!

Puzzle Formation

The Maths:

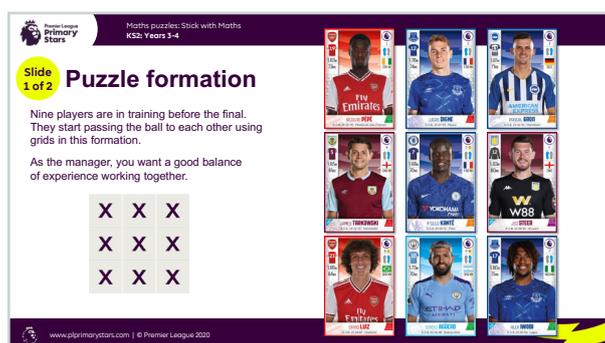
- Addition of 3 numbers.

Key terms:

- Row - across
- Column - down each row
- Diagonal - from corner to corner.

Tips:

- This puzzle is easiest when it can be manipulated
- Draw the numbers 1 -9 on paper and cut them out
- Use a trial and error approach
- Spread out low numbers and high numbers
- When completed the numbers will add up to 15: across rows, down columns and diagonally.



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Missing Shirt

The Maths:

- Addition and subtraction.

Key terms:

- Sum - the total when added together
- Difference - the answer when numbers are subtracted
- Digit - each symbol within a number, for example, the digit 7 in 78.

Tips:

- Work methodically
- Eliminate players in the order of the clues: for example – the missing shirt has 2 digits in the number so any player with a single-digit number on his shirt can be eliminated.

Missing shirt

As the Kit Manager you are preparing the team's kit ahead of the match, but there is one shirt missing!

- The shirt number is 2 digits.
- It is less than 50 but more than 20.
- The sum of the 2 digits is 9.
- The difference between the 2 digits is 3.

Whose shirt are you looking for?

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Roman Confusion

The Maths:

- Recognising, reading and writing Roman numerals.

Key terms:

- See sheet of Roman numerals if needed.

Tips:

- Check all the Roman numerals and match them to the correct players
- For an extra challenge, cut out the players, statistics and Roman numerals separately as a 3-way match.

Roman confusion

The players have had a medical and as the Club Doctor you're entering their statistics onto the database. Disaster! The computer has changed all the numbers into Roman Numerals and one player's stats has been entered incorrectly.

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Team Selection

The Maths:

- Recognising multiples, square numbers and prime numbers.

Key terms:

- Multiple – is a number that can be divided by another number a certain number of times without a remainder. Therefore, a multiple of 9 is in the 9 times tables

Team selection

As the Manager you can only select 5 players to complete the starting team.

You can only select players who have shirt numbers which are:

- Multiples of 9.
- Square numbers.
- Prime numbers.

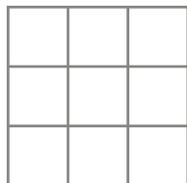
Which player is left to sit on the bench?

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- Square number – a number multiplied by itself to form a square – for example: $3 \times 3 = 9$



- Prime number – a number which can only be divided exactly by itself and 1; it only has 2 factors.
For example:
No numbers multiply to make 11, except 1×11
No numbers multiply to make 29, except 1×29 .

Team photo

The Maths:

- Conversion between units of length
- Add and subtract units of length.

Key terms:

- 1 metre = 100 centimetres.

Tips:

- Work methodically to identify each player with the clue
- If easier, convert each player's height to cms.

