

Two Dice

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Make this a game with a family member. Who can roll the biggest number? Why not use three dice?



Here are two dice.

If you add up the dots on the top you'll get 7.

Find two dice to roll yourself. Add the numbers that are on the top. What other totals could you get if you roll the dice again?

Draw a picture or make a list for these problems. Take your time and do not rush. Take them step at a time and think carefully about what you're doing.

What Could It Be?

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In the calculation below, the box represents a missing digit:

$$13 + \square =$$

What could go in the box? What would the total be each time?

Which is the highest/lowest total?

Which totals are odd/even?

Half Time



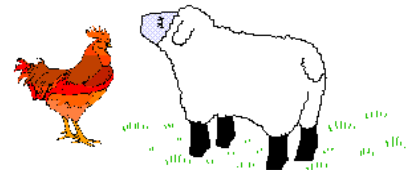
When Spain played Belgium in the preliminary round of the men's hockey competition in the 2008 Olympics, the final score was 4 – 2.



What could the half time score have been?
Can you find all the possible half time scores?
How will you make sure you don't miss any out?

Heads and Feet

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On a farm there were some hens and sheep.

Altogether there were 8 heads and 22 feet.

How many hens were there?

Start with one sheep and one hen, how many heads and feet will this make? Do you need more? Draw a picture to help.

You could act this out with circles of paper and stick it into your Maths book.

Biscuit Decorations

Andrew decorated 20 biscuits to take to a party.

He lined them up and put icing on every second biscuit.

Then he put a cherry on every third biscuit.

Then he put a chocolate button on every fourth biscuit.

So there was nothing on the first biscuit.

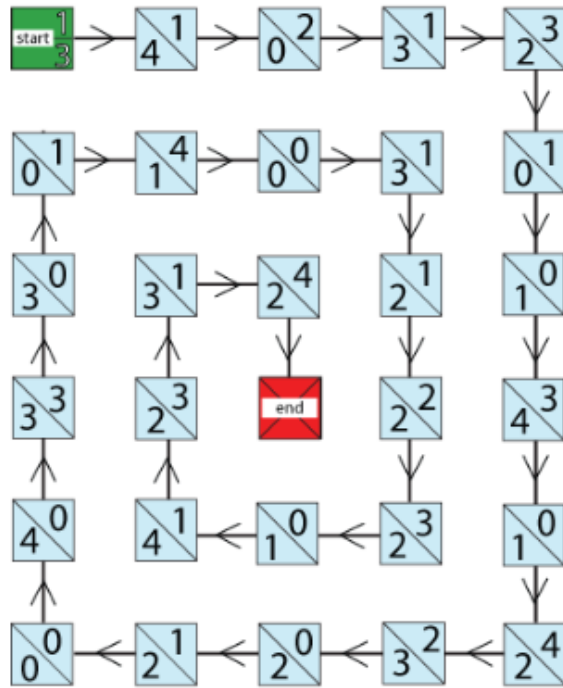
How many other biscuits had no decoration? Did any biscuits get all three decorations?



Jumping Squares

In this problem it is not the squares that jump, you do the jumping!
It is not a race, but a game of skill. You have to be able to look ahead.
The idea is to go round the track in as few jumps as possible, keeping to the rules.

You start on the green square which tells you that you can jump forward either one or three squares. Here is the whole track:



You make your way round the track and finish on the red square with 'end' on it.

If you land on a square which has 2 and 3 on it, you can jump forward - or back - either 2 or 3 squares.

If the square has 2 and 0 on it, you can jump forward - or back - only 2 squares.

If the square has 0 and 0 on it, you cannot jump at all. You have to go right back to the beginning and start again!

Why not make a large version that you can physically jump around?