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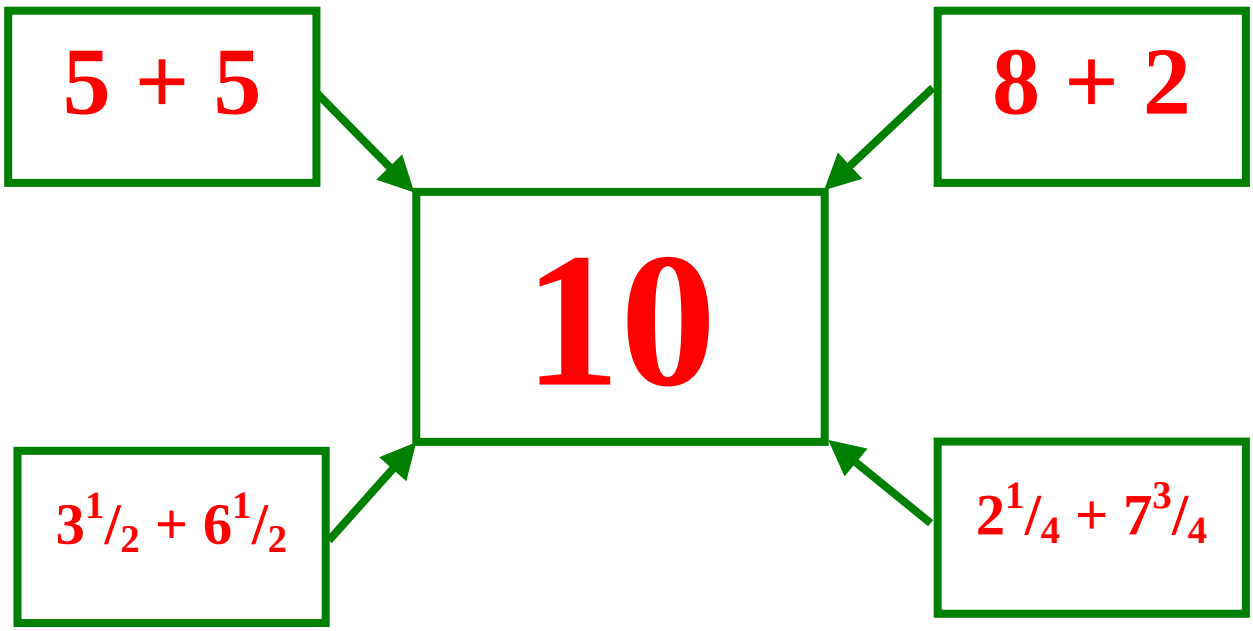
INVESTIGATION

The answer is 10



MathSphere

The Answer is 10

Have you ever wondered how many ways you can get an answer?

That is what this investigation is about.

The Problem

Your job is to find as many ways as you can to get the answer 10.

This may sound easy, but have you thought of all the ways you could do this?

Good Advice:

Work in a logical way.

Try some ideas of your own.

Compare what you have done with your friends.

Enjoy your work and record your results properly.

Try writing your answers in tables, like this:

Sum	Answer
1 + 9	10
2 + 8	10
3 + 7	10
4 + 6	10
5 + 5	10

Try to find as many rules and patterns as you can.

Some ideas:

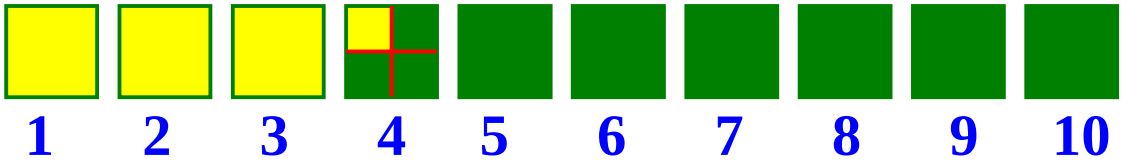
1. You could begin with some simple add sums such as **4 + 6 = 10**.
   Write down all the add sums that make 10.
   Do they make a pattern?

2. Look at subtraction, multiplication and division (but not all at the same time!) Eg. **240 ÷ 24 = 10**

3. You could then try to make 10 by using some fractions.
   Here is an example:

   $3\frac{1}{4} + 6\frac{3}{4} = 10$

Can you show this with a diagram, like this?:



4. You could try working with a calculator and using decimals.
   Here is an example:

   2.6 + 7.4 = 10

How can you find two decimal numbers that make ten?

5. You could try sums with more than one sign. Here is an example:

   1 + 2 + 3 + 4 = 10

Can you find any other interesting ones?

Answer Guide

Here are some possible answers and notes for guidance.

This is the simpler of two similar investigations. The other (The Answer is Zero) is intended for older/more able pupils.

The sums involved in this investigation are quite easy to anticipate and calculate, so the purpose of the project is to get children to look at a whole range of methods and ways of recording their findings (writing, use of tables, fraction diagrams etc).

When carrying out investigations, many children get stuck in one line of thought and you can use the opportunities found here to remove the blinkers and ask children to think more widely about their work.

Try to find time to organise discussion about the children's work, so they can share ideas and learn what it means to be a 'creative mathematician'.