

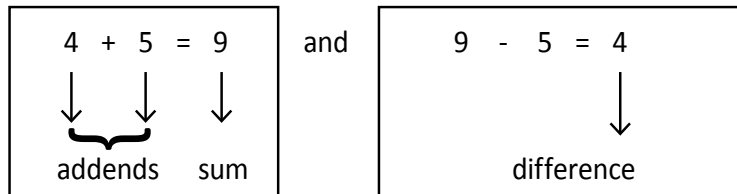
Build your house!

Dear teachers and parents

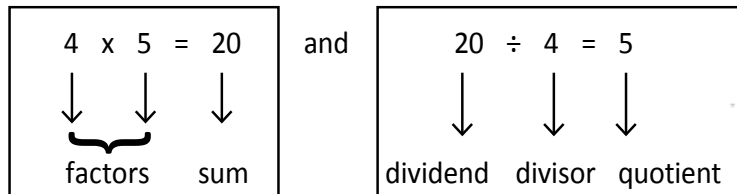
This week our game is aimed at the Foundation Phase. We are looking at the three basic operations **+** addition, **-** subtraction and **x** multiplication. In this phase children are exposed to one- and two-digit numbers. They begin to understand the concepts of the operations, and how they are linked.

Addition is the "putting together" of two groups of objects and finding how many there are altogether. Subtraction tells us "how many are left" or "how many more or less there are".

We say addition and subtraction are **inverse** operations because one operation can "undo" the other. Adding 4 and 5 to get 9 is the opposite of 9 minus 5, leaving 4.



Multiplication is a short-cut method of finding answers for repeated addition. We say multiplication and division are **inverse** operations because one operation can "undo" the other. Multiplying 4 and 5 to get 20 is the opposite of dividing 20 into 4 equal groups, with 5 items in each group, or dividing 20 into 5 equal groups, with 4 items in each group.



Multiplication usually starts with skip-counting. As children learn this skill, they are reinforcing the products for that particular number:

Skip-counting	2	4	6	8	10	12	14
Multiplication	2 x 1	2 x 2	2 x 3	2 x 4	2 x 5	2 x 6	2 x 7

Using repeated addition to show how multiplication works is a great way of connecting the two operations.

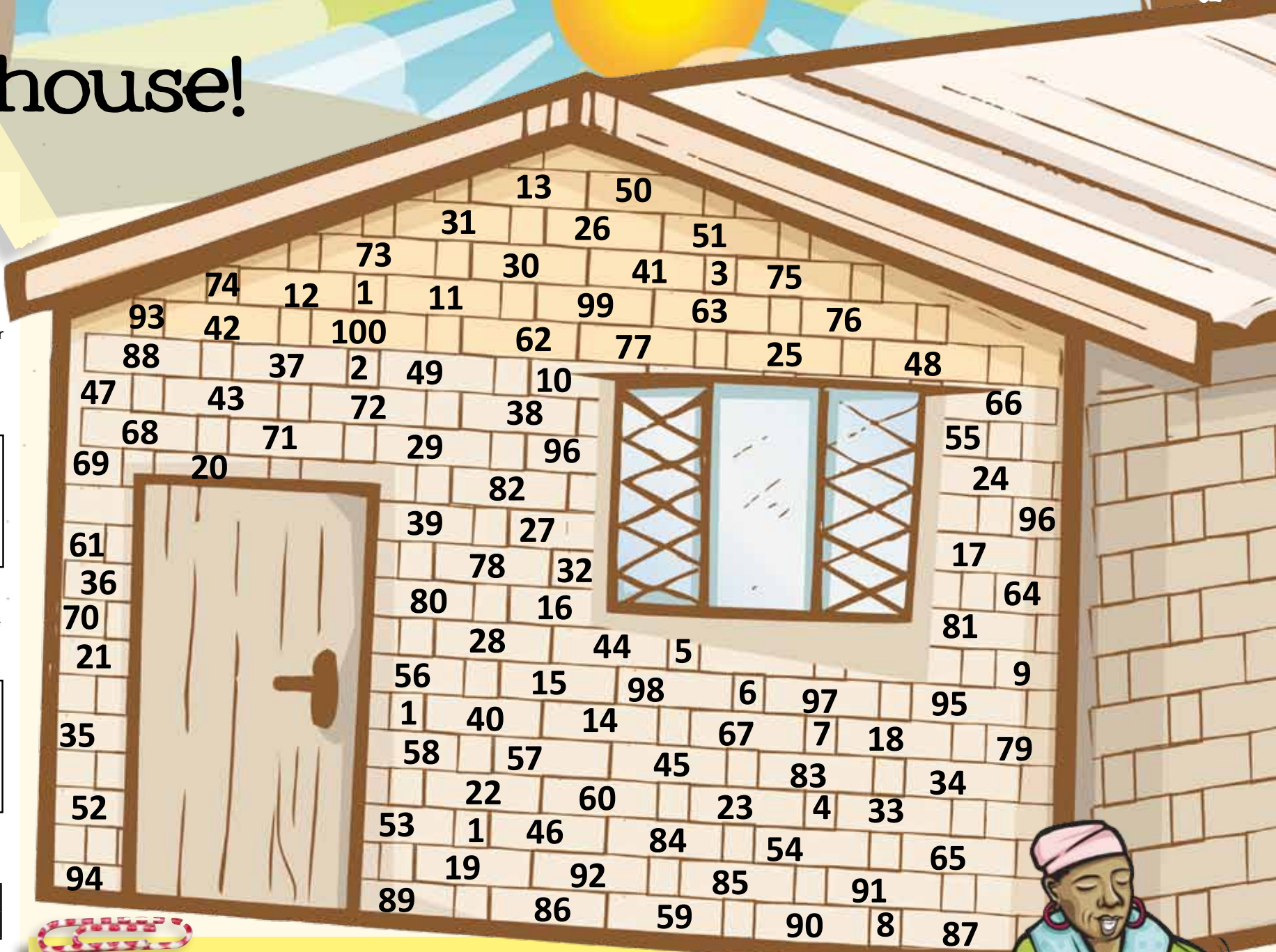
$$2 + 2 + 2 + 2 = 8 \quad \longrightarrow \quad 4 \times 2 = 8$$

For children to grasp these operations, it is very important that they are active in working out the solutions, they can do this through various methods, such as drawing pictures or using counters, an abacus, number lines and a 100-chart.

It is also important that children investigate the number patterns within their calculations, for example:

- Adding 10 has a pattern, you just put 1 in front of the number being added to, for example, $10 + 5 = 15$
- Subtracting 9 – to subtract 9 just take 1 away from the first digit and add it to the second digit, for example, $34 - 9 = (3 - 1 = 2 \text{ and } 4 + 1 = 5)$ answer is 25; $68 - 9 = (6 - 1 = 5 \text{ and } 8 + 1 = 9)$ answer is 59

There are many more such patterns, so encourage children to find these patterns as it makes calculations easier and quicker.



Build your house!

A game for 4 to 6 players

This game puts all the knowledge of the three operations to good use, it also improves mental maths and, of course, gets children to have a little fun, while learning a lot!

What you need:

- Small counters (beans, stones, buttons) – 5 for each player
- Whiteboards and pens; scrap paper; 100 chart or number line – to help players with their calculations

How to play:

1. Before beginning the game, one player calls out a number between 40 and 100. This will be the target number.
2. All players take one of their counters and let it drop somewhere on the board game.
3. Now each player must use the number they landed on and four more numbers around it to get as close to the target number as they can.
4. Only numbers one move away can be used, so, in other words, players can use a number above, below, to the left, to the right or diagonally across from their original number. Each number they use can be covered up by a counter.
5. If a number has already been used by another player, then it cannot be used again.
6. Players may use addition, subtraction or multiplication to get to the target number.
7. They can use the various items listed above to help with their calculations.
8. Agree on a time limit.
9. Players need to explain their solutions.
10. The player with a final number closest to the target number is the winner of that round and gets a point.
11. The player with the most points after the agreed number of rounds is the overall winner.

