Discussion Problems
Step 8: Two-Step Equations

National Curriculum Objectives:

Mathematics Year 6: (6A1) Express missing number problems algebraically

About this resource:

This resource has been designed for pupils who understand the concepts within this step. It provides pupils with more opportunities to enhance their reasoning and problem solving skills through more challenging problems. Pupils can work in pairs or small groups to discuss with each other about how best to tackle the problem, as there is often more than one answer or more than one way to work through the problem.

There may be various answers for each problem. Where this is the case, we have provided one example answer to guide discussion.

We recommend self or peer marking using the answer page provided to promote discussion and self-correction.

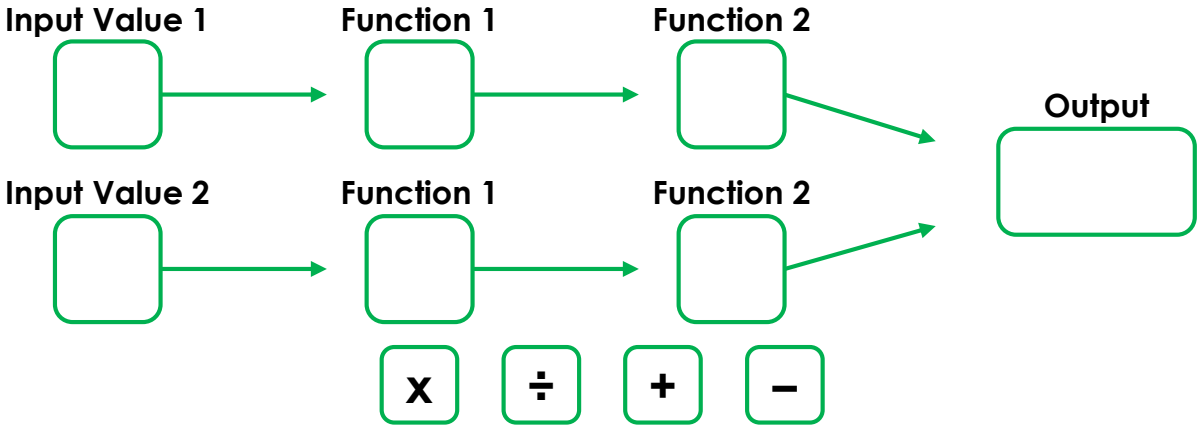
More Year 6 Algebra resources.

Did you like this resource? Don't forget to review it on our website.

Two-Step Equations

1. Using the function cards below, create two two-step equations that will give you the same output value.

Rules:
You can only use each function card once.
You can choose your own input value for each function machine.
Your output value must be between 25 and 50



Investigate different combinations of input values and functions that can be used to equal the same output between 25 and 50.

DP

2. When $n = 4$, create different two-step equations to reach the target numbers in the grid. The first person to cross off 3 in a row, column or diagonal wins the game.

$22\frac{1}{2}$	59	12.5
60	45	37.5
$4\frac{3}{4}$	32	25

Once you've finished, draw your own 3 x 3 grid, populate it with numbers (including decimals and fractions!) between 30 and 50 and then play again!

DP

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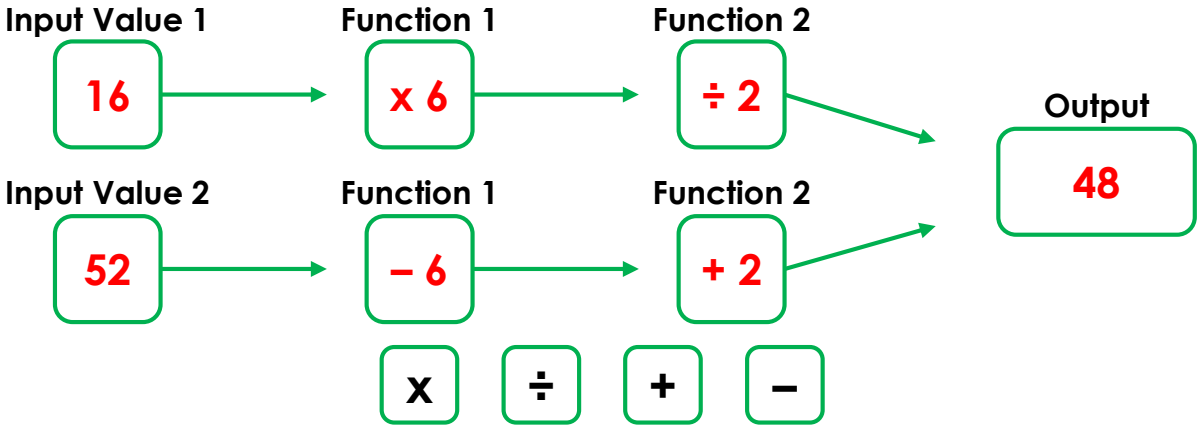

Investigate different combinations of input values and functions that can be used to equal the same output between 25 and 50.

Various answers, for example: 132 ÷ 12 x 4 = 44; 36 + 12 – 4 = 44.

DP

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Various answers, for example:
8.5n + 3.5 = 37.5; (n + 1) x 9 = 45; 10n + 20 = 60

DP