



BUILDING FUNCTIONS



Amy and her friends have built some functions. If they all input the number 1 into their functions Amy's output would be 6, Busi's 1, Chris's $6\frac{1}{2}$ and Dudu's $3\frac{1}{2}$.

Amy's function $a \rightarrow \boxed{+5} \rightarrow a+5$

Busi's function $b \rightarrow \boxed{\times 3} \rightarrow \boxed{-2} \rightarrow 3b-2$

Chris's function $c \rightarrow \boxed{\div 2} \rightarrow \boxed{\times 3} \rightarrow \boxed{+5} \rightarrow 3c/2 + 5$

Dudu's function $d \rightarrow \boxed{-2} \rightarrow \boxed{\times 3} \rightarrow \boxed{\div 2} \rightarrow \boxed{+5} \rightarrow 3(d-2)/2 + 5 = 3d/2 + 2$

Build some of your own functions using the operators [subtract 2], [multiply by 3],

[divide by 2] and [add 5].

Choose inputs and give the corresponding outputs to show how your functions work.

Your inputs can be numbers or variables. Make as many different functions as you can using 2 of the 4 operations without repetition.

[Click here](#) for a poster that you can fill in to show all the different functions that can be made by combining 2 of these 4 operations without repetition. In the first column put the functions that have [subtract 2] first. An example has been shown in the table.

HELP

Start with just 2 operators and numerical inputs. Choose as many different pairs of operators as you can find. Try to find all the possibilities.

Record your functions like Busi but with numbers for input and output.

NEXT

Make as many functions as you can that combine 3 of the 4 operations without repetition.

Then find the functions that combine all 4 operations without repetition.

Work with a friend and make your own functions. Then try to work out the rule made up by each other. If you give your friend the your function rule and an output can he work out the input?