

# Function

## Unit 1 – Skill Builder 3 – Answers

7 8 9 10 11 12



### Introduction

Functions are different to programs. A function keeps variables to itself, this means if you use 'x' in your function, it will not change the value of 'x' in your document. Functions have a reduced set of available commands; however they can be called upon in a spreadsheet or graphed.



It is assumed that you have completed **Unit 1 Programming Basics - Skill Builder 3**

You may return to the Skill Builder exercise at any time to review the instructions.

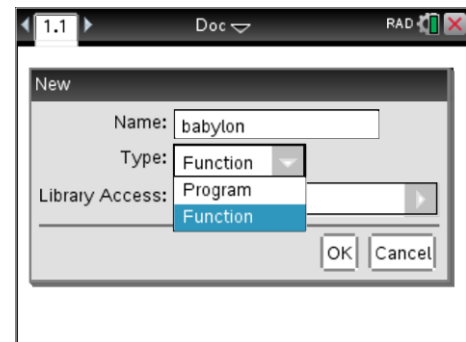


### Function

Start a new document and create a **function** titled:

Babylon

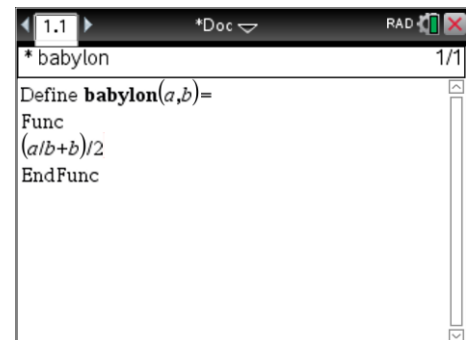
Note that the option to change from Program to Function is available in the **Type** drop down list.



The Babylon function involves two variables  $a$  and  $b$

The variables used in the function can be placed in the function definition (as shown opposite).

The Babylon rule doesn't need to be 'stored' anywhere as it will automatically be returned as the output.



Enter the rule linearly as:  $(a/b + b)/2$  or as:  $\frac{a}{b} + b$

Save the function by pressing Ctrl + B.

Insert a calculator application.

Run the Babylon function and start with the following values:

Babylon(200,15)

Notice that a fraction (exact value) is returned. Press Ctrl + Enter to return an approximate value.



**Question: 1.**

Run the function again, this time as: Babylon(200,ans) What value is returned? fa

Answer:  $\text{babylon}(200,\text{ans}) = \text{Babylon}(200,14.166) = 14.1422$

**Question: 2.**

Press Enter. What value is returned this time?

Answer:  $\text{babylon}(200,14.1422) = 14.1421$

**Question: 3.**

Explain what the 'ans' option is doing.

Answer: 'ans' = answer. The previous answer is substituted into the second variable of the function command.

Answer refers to the most recent answer, even though the value is visually substituted the calculator remember the reference to answer.



'ans' = Answer and can be typed directly or by pressing Ctrl + (-). The answer operation can be used in any calculation.

Insert a Spreadsheet application.

In cell A1 type:

= Approx(Babylon(200,15))

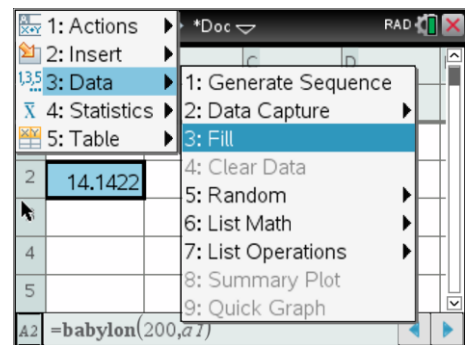
In cell A2 type:

=Babylong(200,a1)

While cell A2 is still highlighted, use the [Menu] key and to access:

DATA > FILL

Arrow down to cell A5 and press [Enter]



**Question: 4.**

What values are created in cells A3, A4 and A5

Answers: Same results as per calculator application. 14.1421, 14.1421, and 14.1421

**Question: 5.**

Highlight cell A5. What is the formula in cell A5? (The formula is visible at the base of the screen. A5 = ...

Answer:  $\text{babylon}(200,\text{a4})$