

The BriSopht Playground

Exercises in BASIC

By

Johnny Jarrell

March 9, 2021

<https://www.johnnyjarrell.com>

Permission granted to make copies for personal or classroom use.

Copyright © 2021 | Johnny Jarrell | <https://www.basicforkids.com>

Contents

Happy Birthday	4
Drawing With Text	5
Let's Add Some Numbers.....	7
Let's Subtract Some Numbers.....	8
Let's Multiply Some Numbers.....	9
Let's Divide Some Numbers	10
Learning About Variables.....	11
What's Your name?.....	12
Counting Time	13
Sparkly Fun.....	14

Happy Birthday

Enter this program and **RUN** it.

```
10 PRINT "HAPPY"  
20 PRINT "BIRTHDAY"
```

What happened?

What does the PRINT command do?

Add this line, replace YOUR NAME with your actual name and **RUN** the program.

```
30 PRINT "YOUR NAME"
```

Add these lines and **RUN** the program.

```
40 PRINT  
50 PRINT "LET'S EAT CAKE"
```

What did line 40 do?

Printing With Color

The color command tells the computer what color the printed words should be and what color the screen should be when erased.

Type this program and run it.

```
10 COLOR WHITE, BLUE
20 ERASE
30 PRINT "HELLO"
```

What color is the word "HELLO"?

What color is the background?

Change line 10 so HELLO will be RED and the background will be YELLOW.

Run the program and check your work.

Another command to erase the screen is CLS. This stands for **C**lear **S**creen.

Replace line 20 with

```
20 CLS
```

Run the program and see what happens.

Drawing With Letters

Type this program and run it.

```
10 PRINT "PPPPPPPP"
20 PRINT "PP      PP"
30 PRINT "PP      PP"
40 PRINT "PPPPPPPP"
50 PRINT "PP"
60 PRINT "PP"
70 PRINT "PP"
```

What picture appeared after you run the program?

Add this line to the top of your program and run it.

```
5 COLOR YELLOW,BLUE
```

What did this new line do?

Create a program to draw another letter.

Let's Add Some Numbers

Enter the program and run it.

```
10 PRINT 5+3
```

What is the answer?

Add lines to your program to answer the following addition problems.

Write the answer to each after you run your program.

$8+10=$

$4+5=$

$23+8=$

$5+2+6+9=$

$23+45+10+54=$

$100+230=$

$231+387+923=$

Let's Subtract Some Numbers

Enter the program and run it.

```
10 PRINT 12-5
```

What is the answer?

Add lines to your program to answer the following subtraction problems.

Write the answer to each after you run your program.

$6-2=$

$15-12=$

$30-20-5=$

$120-45=$

$540-234=$

$2000-1500=$

$4-2-2=$

Let's Multiply Some Numbers

Enter the program and run it.

The * symbol is used for multiplication.

```
10 PRINT 4*5
```

What is the answer?

Add lines to your program to answer the following multiplication problems.

Write the answer to each after you run your program.

3X5=

2X15=

12X14=

2X3X4=

113X150=

300X254=

2X6X3X9=

Let's Divide Some Numbers

Enter the program and run it.

The / symbol is used for division.

```
10 PRINT 6/3
```

What is the answer?

Add lines to your program to answer the following multiplication problems.

Write the answer to each after you run your program.

$8 \div 4 =$

$12 \div 3 =$

$16 \div 4 =$

$45 \div 5 =$

$120 \div 12 =$

$240 \div 20 =$

$1000 \div 200 =$

Learning About Variables

A variable is like a box. It is used to hold numbers or words. A real-world example would be having an egg carton labeled "A" which has 5 eggs and another egg carton labeled "B" which has 8 eggs. Here is what it would look like to the computer.

```
10 LET A=5
```

```
20 LET B=8
```

Type the program and run it.

What happened?

Add this line and run it.

```
30 PRINT A+B
```

What happened?

Add these lines store a word in a variable and display it on the screen.

```
40 PRINT
```

```
50 LET C$="HELLO"
```

```
60 PRINT C$
```

What's Your name?

Enter this program and run it.

```
10 INPUT "WHAT'S YOUR NAME? ";N$
20 PRINT
30 PRINT "HELLO ";N$
```

Variables, such as N\$ in line 10, store information.

The command INPUT asks you type something in and will store that information in the variable.

What information is stored in the variable N\$?

A variable without the \$ is used to store numbers.

Add these lines to the program and run it.

```
40 PRINT
50 INPUT "HOW OLD ARE YOU?";A
60 PRINT
70 PRINT "WOW! YOU ARE ";A;" YEARS OLD!"
```

Change line 50 to ask how many pets they have.

Change the message in line 70 to reply back.

Counting Time

Type this program and run it.

```
10 FOR A=1 TO 10
20 PRINT A
30 NEXT A
```

What happened?

Change the program so it counts to 20.

Change the program so it starts counting from 5.

To make the program count backwards, change line 10 to this

```
10 FOR A=10 TO 1 STEP -1
```

Run it and make sure it works.

Change your program to count backwards from 20.

Change your program so it stops at 5.

Sparkly Fun

Type this program and run it.

```
10 FOR I=1 TO 20
20 LET X=RND(79)
30 LET Y=RND(32)
40 SET(X,Y,RED)
50 NEXT I
```

Line 20 assigns a random number between 1 and 79 to the variable X.

What does line 30 do?

What does line 40 do?

Change line 40 to draw BLUE squares.

Change line 40 to draw YELLOW squares.

Change line 10 to draw 40 dots.

Change line 10 to draw 100 dots.