

Who am I?







* ADVENTURE * (Version: 8.4) Adventure number: 2 (Version: 4.08)
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This program will allow you to have an "Adventure" without ever leaving your armchair! You will find yourself in a strange new world. You will be able to LOOK AT, PICK-UP and otherwise MANIPULATE the objects you find there. You will also be able to TRAVEL from location to location. I will be your puppet in this Adventure. You command me with 2 word ENGLISH sentences. I've over 120 word vocabulary so if a word doesn't work, try another!

Some commands I know: HELP, SAVE GAME, SCORE, INVENTORY, QUIT.

The Author has worked over a year on this program and is currently writing many new Adventures, so PLEASE:
DON'T COPY OR ACCEPT A "PIRATED" COPY OF ADVENTURE! Press enter→



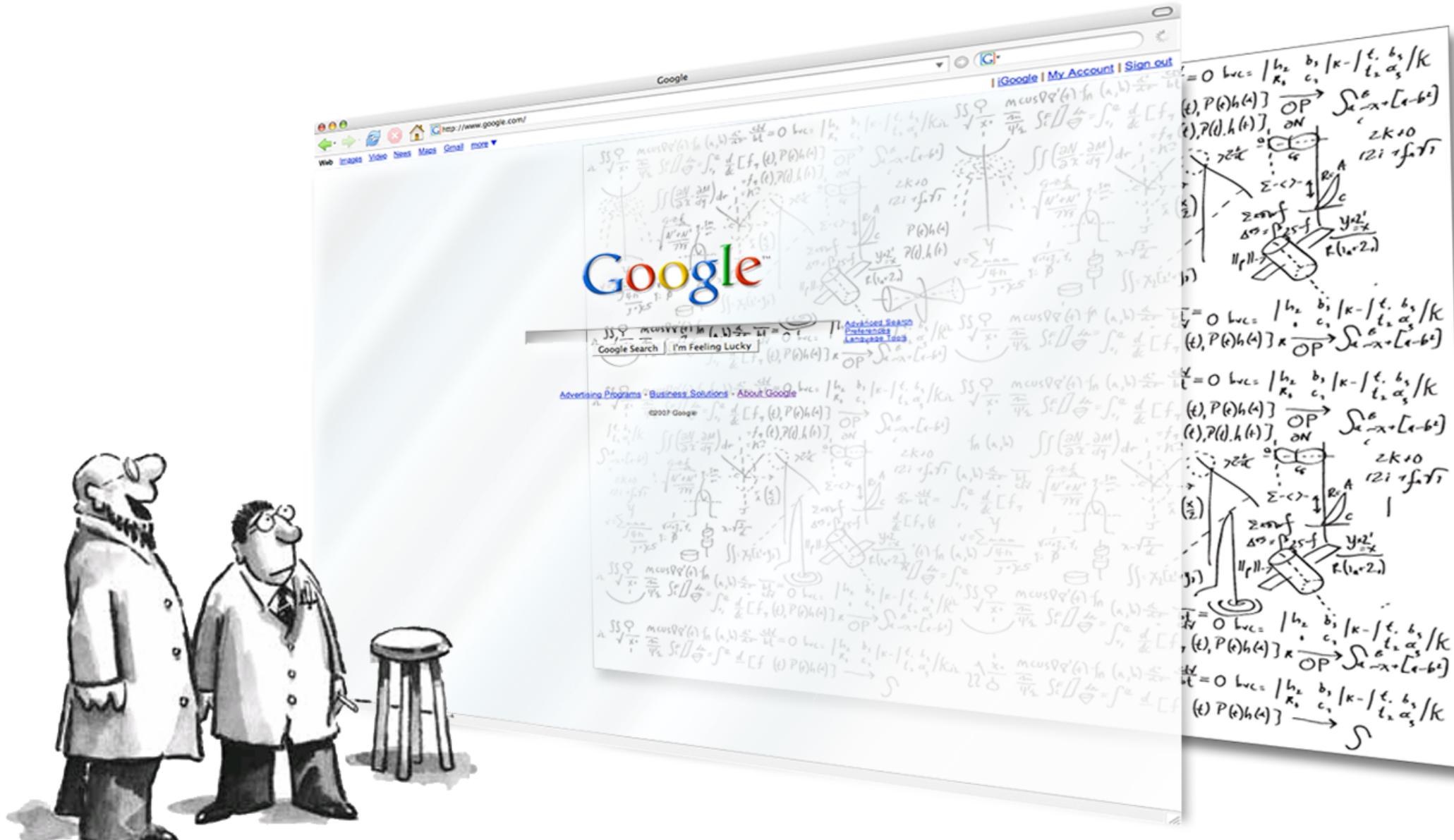




A bit about Google

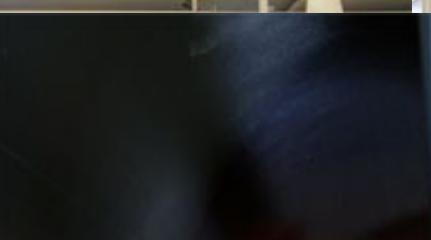


To make search easy is a (very) hard problem

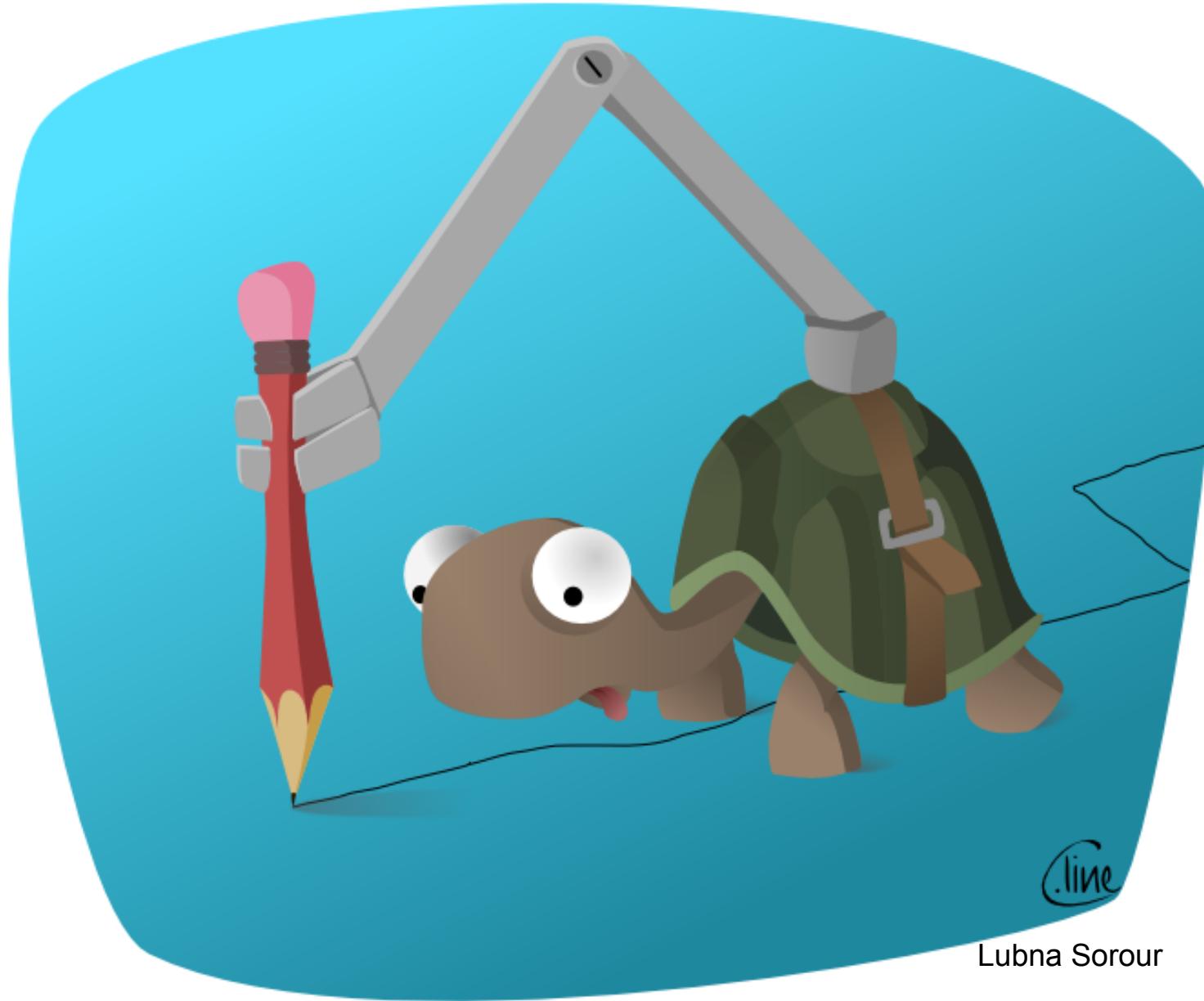


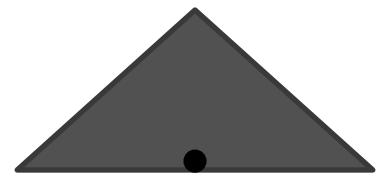
"Hey, no problem!"

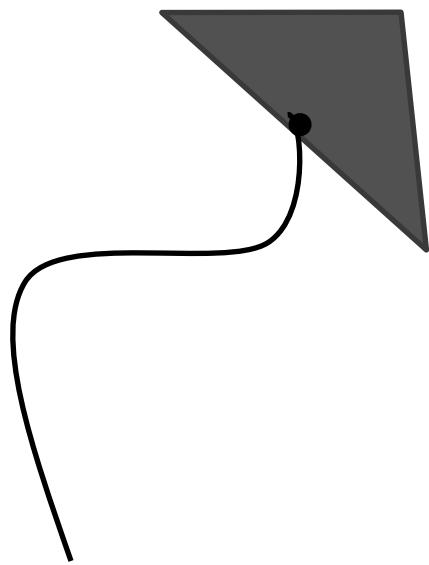




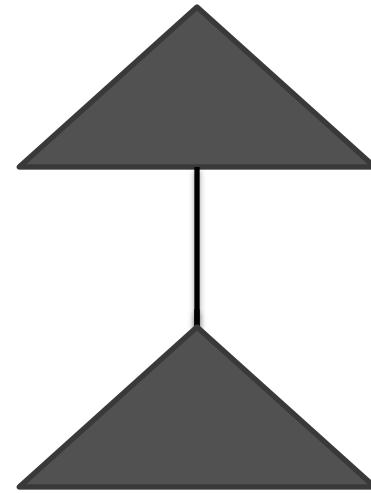
Turtle Graphics



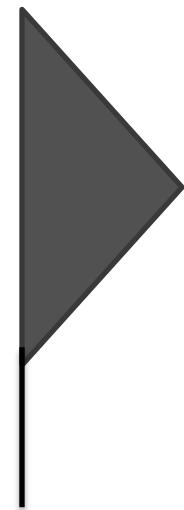




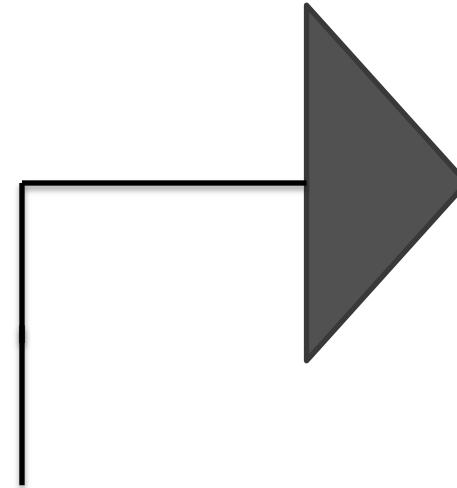




FORWARD 15



FORWARD 15
RIGHT 90



```
FORWARD 15  
RIGHT 90  
FORWARD 15
```

We're going to learn 3 things today

- How to draw pretty pictures
- How to save lots of typing
- If we're quick, the three building blocks of programming:
 - Looping – doing the same thing lots of times
 - Variables – saving values that we want to use elsewhere
 - Functions – several lines of code we want to use again & again
 - Note : Functions are sometimes called Procedures or Methods.

This is going to be a quick run through – don't be worried if you don't understand everything today!

Basic Logo Commands

FORWARD - followed by the number of steps

BACKWARD - followed by the number of steps

RIGHT - followed by the angle of rotation

LEFT - followed by the angle of rotation

Basic Logo Commands

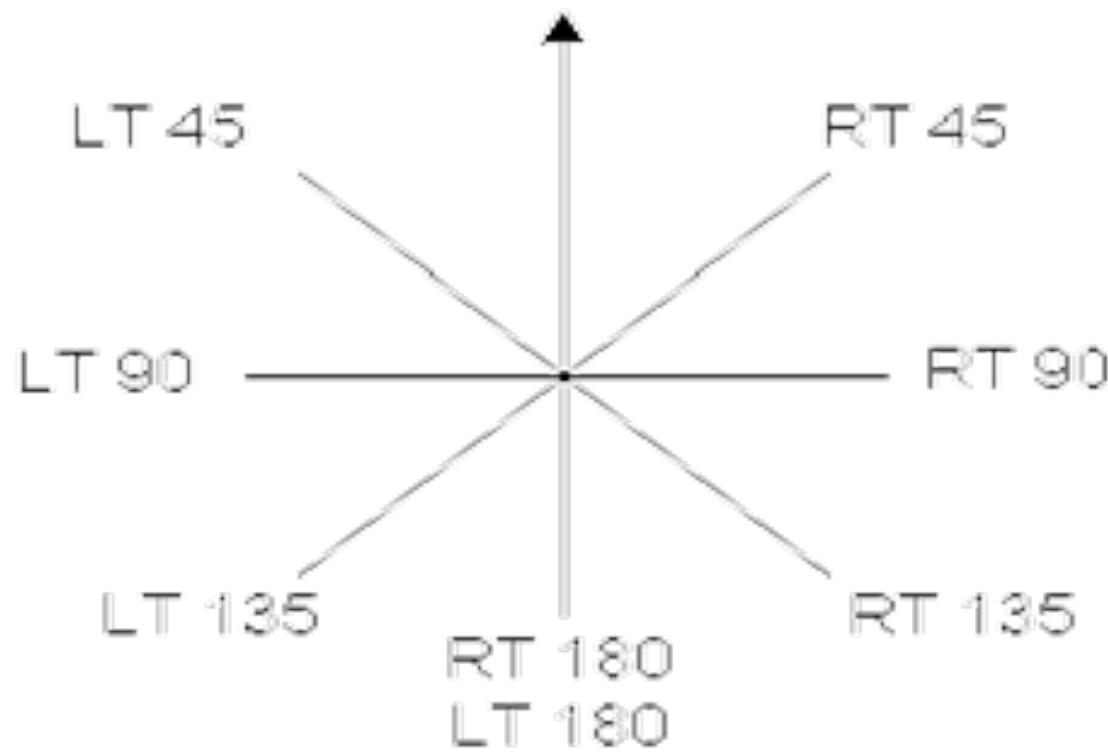
FD

LT

RT

BK

Turning around



FD 50

PU

FD 50

PD

FD 50



PU = PenUp

PD = PenDown

Let's get started...

<http://www.mikewarriner.com/jslogo>

Or use LOGO on your desktops

Task – draw some pictures

SQUARE

FD 100

RT 90

FD 100

RT 90

FD 100

RT 90

FD 100

TRIANGLE

FD 100

RT 120

FD 100

RT 120

FD 100

HEXAGON

FD 100

RT 60

FD 100

PENTAGON

FD 100

RT 72

FD 100

RT 72

FD 100

RT 72

FD 100

RT 72

FD 100

HINT : type **CLEARSCREEN** before each picture to clear the screen and bring the turtle back home

LOOPS

- Think of a loop as a way to save typing.

```
REPEAT 4 [FD 100 RT 90]
```

LOOPS

```
REPEAT 4 [FD 100 RT 90]
```

Basic structure is to tell Logo that you want to repeat something

```
REPEAT
```

Followed by the number of times you want to repeat it

```
REPEAT 3
```

Followed by the thing you want to repeat in square brackets

```
REPEAT 3 [FD 100 RT 90]
```

Task – try these using loops

SQUARE

TRIANGLE

HEXAGON

PENTAGON

FD 100

FD 100

FD 100

FD 100

RT 90

RT 120

RT 60

RT 72

Variables

```
Make "size random 500  
Print :size
```

make – creates a variable with a value
"size– sets a variable called size
:size – gets the value of the variable
called size

Try this now! Press Run lots of times and see what happens

Adding things to Logo - Functions

Function save typing... even more typing than loops:

```
TO star
  REPEAT 5 [FD 50 RT 144]
END
```

```
star
```

Adding things to Logo - Functions

Function save typing... LOTS of typing...

TO star

REPEAT 5 [FD 50 RT 144]

END

star

Adding things to Logo – Variables in functions

```
TO randomstar  
  make "size 50 + random 500  
  REPEAT 5 [FD :size RT 144]  
END
```

```
clearscreen  
randomstar
```

make – creates a variable with a value

"size– sets a variable called size

:size – gets the value of the variable called size

Adding things to Logo - Parameters

```
TO square :size
  REPEAT 4 [FD :size RT 90]
END
```

Clearscreen

```
Repeat 36 [square 100 rt 10]
```

Recap on what we learnt...

- How to draw pretty pictures
- How to save lots of typing
 - Looping – doing the same thing lots of times
 - Functions – several lines of code we want to use again & again
 - Note : Functions are sometimes called Procedures or Methods.
 - Variables – saving values that we want to use elsewhere

Where next?

<http://www.mikewarriner.com/jslogo>

- Online LOGO interpreter you can play with at home

<http://www.mikewarriner.com/docs>

- This document and others

<http://turtleacademy.com/>

- A good learning resource for Logo to go to next. Uses the same online interpreter above.

Out of time! Thanks for listening.
