

# Homework, Week 0, part A

September 12, 2014

Invoke clisp and type the following commands. Remember, a ‘:q’ (COLON QUE), ‘:a’ (COLON AIGH), CONTROL-BREAK, or CONTROL-C will restore the top level prompt if you make a mistake. This explores five Lisp functions, + (addition), - (subtraction), \* (multiplication), and / (division), and (expt) which is short for ‘exponent’. Write down each result and see if you can figure out what each one does. Some will create errors, such as (-).

(+)	(/ 4 3)
(+ 1)	(/ 4 3 2)
(+ 1 2)	(/ 4 3 2 1)
(+ 1 2 3)	
(+ 1 2 3 4)	<i>;;do these give the same answer?</i>
	(/ 7 21)
(-) <i>;this is an error</i>	(/ 7.0 21)
(- 4)	(/ 7 21.0)
(- 4 3)	
(- 4 3 2)	( <b>expt</b> 2 0)
(- 4 3 2 1)	( <b>expt</b> 2 1)
	( <b>expt</b> 2 2)
(*)	( <b>expt</b> 2 3)
(* 1)	( <b>expt</b> 2 4)
(* 1 2)	( <b>expt</b> 2 5)
(* 1 2 3)	( <b>expt</b> 100 2)
(* 1 2 3 4)	( <b>expt</b> 2 100)
	<i>;;this will impress you!</i>
(/)	( <b>expt</b> 99 99)
(/ 4)	

Exit from clisp with (QUIT).