

# Algorithm: Multiplication of floating point numbers

- Read  $x_1$ ,  $e_1$ ,  $x_2$  and  $e_2$
  - Set  $x = x_1 * x_2$
  - Set  $e = e_1 + e_2$
  - If ( $\text{abs}(x) \geq 1.0$ ) then
$$x = \frac{x}{10}$$
$$e = e + 1$$
End if
  - If ( $\text{abs}(x) < 0.1$ ) then
$$x = x * 10$$
$$e = e - 1$$
End if
  - If ( $e < -99$ ) then  
Print ("Underflow")  
STOP  
End if
  - If ( $e > 99$ ) then  
Print ("Overflow")  
STOP  
End if
  - Print( $x$ ,  $e$ )
- END