Learning Wolfram Language

Exercises for Section 1 | Starting Out: Elementary Arithmetic

1.1 Compute1+2+3.

In[13]:=
```
1 + 2 + 3
```

Out[13]=
```
6
```

1.2 Add the numbers 1,2,3,4,5.

In[15]:=
```
1 + 2 + 3 + 4 + 5
```

Out[15]=
```
15
```

1.3 Multiply the numbers 1, 2, 3, 4, 5.

In[16]:=
```
1 * 2 * 3 * 4 * 5
```

Out[16]=
```
120
```

1.4 Compute 5 squared (i . e . 5*5 or 5 raised to the power 2)

In[17]:=
```
5 ^ 2
```

Out[17]=
```
25
```

1.5 Compute 3 raised to the fourth power .

In[18]:=
```
3 ^ 4
```

Out[18]=
```
81
```

1.6 Compute 10 raised to the power 12 (a trillion) .

In[20]:=
```
10 ^ 12
```

Out[20]=
```
1 000 000 000 000
```

1.7 Compute 3 raised to the power 7 x8 .

In[19]:=
```
3 ^ (7 * 8)
```

Out[19]=
```
523 347 633 027 360 537 213 511 521
```

1.8 Add parentheses to 4 - 2*3 + 4 to make 14.

In[21]:=
```
(4 - 2) * (3 + 4)
```
Out[21]= 14

1.9 Compute twenty - nine thousand mutiplied by seventy - three .

In[22]:=
```
29 000 * 73
```
Out[22]= 2 117 000

+1.1 Add all integers from - 3 to + 3.

In[23]:=
```
-3 + -2 + -1 + 1 + 2 + 3
```
Out[23]= 0

+1.2 Compute 24 divided by 3.

In[24]:=
```
24 / 3
```
Out[24]= 8

+1.3 Compute 5 raised to the power 100.

In[25]:=
```
5 ^ 100
```
Out[25]= 7 888 609 052 210 118 054 117 285 652 827 862 296 732 064 351 090 230 047 702 789 306 640 625

+1.4 Subtract 5 squared from 100

In[26]:=
```
100 - (5 ^ 2)
```
Out[26]= 75

+1.5 Multiply 6 by 5 squared, and add 7

In[27]:=
```
(6 * (5 ^ 2)) + 7
```
Out[27]= 157

+1.6 Compute 3 squared minus 2 cubed .

In[28]:=
```
(3 ^ 2) - (2 ^ 3)
```
Out[28]= 1

+1.7 Compute 2 cubed times 3 squared

In[29]:=
```
(2 ^ 3) * (3 ^ 2)
```
Out[29]= 72

+1.8 Compute "double the sum of eight and negative eleven"

In[30]:=
```
(8 - 11) * 2
```
Out[30]= −6

Exercises for Section 2 | Introducing Functions

2.1 Compute 7 + 6 + 5 using the function Plus

In[31]:=
```
Plus[7, 6, 5]
```
Out[31]= 18

2.2 Compute 2 x (3 + 4) using Times and Plus

In[32]:=
```
Times[2, Plus[3, 4]]
```
Out[32]= 14

2.3 Use Max to find the larger of 6x8 and 5x9

In[33]:=
```
Max[Times[6, 8], Times[5, 9]]
```
Out[33]= 48

2.4 Use RandomInteger to generate a random number between 0 and 1000.

In[34]:=
```
RandomInteger[1000]
```
Out[34]= 443

2.5 Use Plus and RandomInteger to generate a number between 10 and 20.

In[35]:=
```
Plus[10, RandomInteger[10]]
```
Out[35]= 12

+2.1 Compute 5 x4x3x2 using Times .

In[36]:=
```
Times[5, 4, 3, 2]
```
Out[36]= 120

+2.2 Compute 2 - 3 using Subtract

In[37]:=
```
Subtract[2, 3]
```
Out[37]= −1

+2.3 Compute (8 + 7) + (9 + 2) using Times and Plus

In[38]:=
```
Times[Plus[8, 7], Plus[9, 2]]
```
Out[38]= 165

+2.4 Compute (26 - 89)/9 using Subtract and Divide

In[39]:=
```
Divide[Subtract[26, 89], 9]
```
Out[39]= −7

+2.5 Compute 100 - 5^2 using Subtract and Power

In[40]:=
```
Subtract[100, Power[5, 2]]
```
Out[40]= 75

+2.6 Find the larger of 3^5 and 5^3

In[41]:=
```
Max[Power[3, 5], Power[5, 3]]
```
Out[41]= 243

+2.7 Multiply 3 and the larger of 4^3 and 3^4

In[42]:=
```
Times[3, Max[Power[4, 3], Power[3, 4]]]
```
Out[42]= 243

+2.8 Add two random numbers each between 0 and 1000.

In[43]:=
```
Plus[RandomInteger[1000], RandomInteger[1000]]
```
Out[43]= 698