3.10 Exercises

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1) Yes, literal values are simple expressions.

2) Yes, variables are simple expressions.

3) Yes, it’s a literal value and a variable combined by an operator to create a complex expression

4) It adds them together

5) //, /, \*, % (the most left) > +,-, (the most left) > =

6)

a. x

b. x

c. 2

d. x + 1

e. it gives an error (type error)

f. 3

7)

a. 7

b. 0.4

c. 0

d. 2.5

e. 2

f. -6

g. 7.0

h. 0.4

i. 2.5

j. -1.0

k. 7.0

l. 0.4

m. 2.5

n. 2.5

o. 0.8

p. 0.8

q. 0.8

r. 0.8

s. 5.0

t. 5.0

u. 5.0

v. 5.0

8) Nothing

9)

a. -13

b. 4

c. 1.0

d. 1

e. -2.6

f. -3

g. 8.666….

h. 8

i. 4.0

j. 4

k. -0.5

l. -0.5

m. 0.9

n. 0.363636…

o. 6.8333….

p. 2.1666….

q. 6.8333….

r. 52.5

10) The # symbol

11) By entering a new line, the comment works until end of the line

12) Many comments (to explain the purpose of a block of code)

13) To explain the purpose of a line or block of code for human readers

14) So a team of programmers can understand each other’s codes quicker. Even a programmer can forget what some parts of their code do after a long time.

15)

Name Error = when a variable in a statement hasn’t yet been assigned

Value Error = when we want the user to enter a number in the input but the enter a string (converting strong to an integer)

Zero Division Error = when you try to divide by zero

Indentation Error = when the spaces or tabs are not places properly

Over Flow Error = when an operation exceeds the limits and can’t be represented

Syntax Error = when the interpreter detects an invalid program statement

Type Error = when the invalid data type of objects are in an operation (dividing an integer with a string)

16)

#1 no error

#2 no error

#3 no error

#4 logic error: here the division has a higher precedence

Correct form: print((n1+n2)/2)

#5 no error

#6 Zero Division Error: can’t divide by zero

#7 syntax error: doesn’t follow the rule for the structure of an assignment statement

Correct form: d1 = n1\*n2

#8 no error

17)

a. x+=1

b. x/=2

c. x-=1

d. x+=y

e. x-=y+7

f. x\*=2

g. number\_of\_closed\_cases+=2\*ncc

18)

3

1

19)

a. Because the variable r used in the formula is assigned as 0 before we get it from the user and the input value isn’t used in the formula

b. By writing the formula after we get the r from user

20) (Answer in the python file)

21) (Answer in the python file)