Chapter 2 Elementary Programming

1.

```
area is 11.0
```

2.

```
miles = 100
kilometers = 1.609 * miles
print(kilometers)
```

The value of kilometers is 160.9.

3.

```
value = eval(input("Enter a numeric value: "))
```

4.

It will cause an error. You have to enter a numeric value.

5.

To break a long line, place the line continuation symbol (\) at the end of a line to tell the interpreter that the statement is continued on the next line.

6.

Valid identifiers: miles, Test, apps, x, y, radius

Invalid identifiers: a+b, b–a, 4#R, $4, #44,
if, elif

Keywords:
if, elif

7. Use lowercase for variables. If a name consists of several words, concatenate them into one, making the first word lowercase and capitalizing the first letter of each subsequent word—for example, the variables radius, area, and numberOfStudents.
8. You should write a = 2
9. x, y, and z become 0
10. a becomes 2 and b becomes 1
11.

Expression	
`42 / 5 = 8.4`	_____
`42 // 5 = 8`	_____
`42 % 5 = 2`	_____
`40 % 5 = 0`	_____
`1 % 2 = 1`	_____
`2 % 1 = 0`	_____
`45 + 4 * 4 - 2 = 59`	_____
`45 + 43 % 5 * (23 * 3 % 2) = 48`	_____
`5 ** 2 = 25`	_____
`5.1 ** 2 = 26.0099`	_____

12.

`(2 + 100) % 7 = 4. So it is Thursday.`

13. 25/4= 6.25 If you want the quotient to be an integer, use 25 // 4.

14.

4.0 / (3.0 * (r + 34)) - 9 * (a + b * c) + (3.0 + d * (2 + a)) / (a + b * d)

15. m * r * r or m * r ** 2

16.

```
a += 4 (a is 5)
a -= 4 (a is -3)
a *= 4 (a is 4)
a /= 4 (a is 0.25)
a //= 4 (a is 0)
a %= 4 (a is 1)
a = 56 * a + 6  (a is 62)
```

17. The fractional part is truncated. Calling int(value) does not change variable value.

18.

print(int(value)) 4

print(round(value)) 5

print(eval("4 * 5 + 2")) 22

print(int("04")) 4

print(int("4.5")) causes an error

print(eval("04")) causes an error

19. The UNIX epoch is the time 00:00:00 on January 1, 1970 GMT.

20. time.time() returns the seconds with millisecond precision since the UNIX epoch.

21. To obtain seconds from the return value of time.time(), use int(time.time()).