

Exercise on Lesson 5

Unless otherwise instructed in the following problems, state what gets printed.

1. Write code that will create a constant E that's equal to 2.718.

final double E = 2.718;

2. Write the simplest type constant that sets the number of students, *NUM_STUDENTS*, to 236.

final int NUM_STUDENTS = 236;

3. What's wrong, if anything, with the following code in the *main* method?

```
final double Area;  
Area = 203.49;
```

There is nothing wrong with this code.

4.

```
int cnt = 27.2;  
System.out.println(cnt);
```


What's printed?

The code will not compile.

5.

```
double d = 78.1;  
int fg = (int)d;  
System.out.println(fg);
```


What's printed?

78

6. Is `double f4 = 22;` legal?

Yes

7. The following code stores a 20 in the variable *j*:

```
double j = 61/3;
```

What small change can you make to this single line of code to make it produce the “real” answer to the division?

double j = 61/3.0;

8. `System.out.println((double)(90/9));`

10.0

9. `System.out.println(4 + 6.0/4 + 5 * 3 - 3);`

17.5

10. `int p = 3;
double d = 10.3;
int j = (int)5.9;
System.out.println(p + p * d - 3 * j);`

18.9

11. `int p = 3;
double d = 10.3;
int j = (int)5.9;
System.out.println(p + p * (int)d - 3 * j);`

18

The following code applies to 12 – 15:

```
int dividend = 12, divisor = 4, quotient = 0, remainder = 0;  
int dividend2 = 13, divisor2 = 3, quotient2 = 0, remainder = 0;  
quotient = dividend / divisor;  
remainder = dividend % divisor;  
quotient2 = dividend2 / divisor2;  
remainder2 = dividend2 % divisor2;
```

12. `System.out.println(quotient);`

3

13. `System.out.println(remainder);`

0

14. `System.out.println(quotient2);`

4

15. `System.out.println(remainder2);`

1

16. Write a line of code in which you divide the double precision number d by an integer variable called i . Type cast the *double* so that strictly integer division is done. Store the result in j , an integer.

$j = (\text{int}) d / i;$

17. Suppose we have a line of code that says

Final String M = “ugg”;

Later in the same program, would it be permissible to say the following?

M = “wow”;

No

18. Is the following code legal? If so, what is printed? If not, why?

```
int k = 7;  
k*=.5;  
System.out.println(k);
```

Yes

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