# Assignment Operators

Java has several assignment operators other than =, most of which are listed here.

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Operation</th>
<th>Precedence</th>
<th>Association</th>
</tr>
</thead>
<tbody>
<tr>
<td>var = expr</td>
<td>Store expr into var</td>
<td></td>
<td></td>
</tr>
<tr>
<td>var *= expr</td>
<td>var = var * expr</td>
<td>14</td>
<td>Right to Left</td>
</tr>
<tr>
<td>var /= expr</td>
<td>var = var / expr</td>
<td></td>
<td></td>
</tr>
<tr>
<td>var %= expr</td>
<td>var = var % expr</td>
<td></td>
<td></td>
</tr>
<tr>
<td>var += expr</td>
<td>var = var + expr</td>
<td></td>
<td></td>
</tr>
<tr>
<td>var -= expr</td>
<td>var = var - expr</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*See the topic Data Types and Operators ➔ Introduction to Java Data Types and Operators

## Examples

```java
double a, b, c;
a = 2;
b = c = a * 5;
```

<table>
<thead>
<tr>
<th>a</th>
<th>b</th>
<th>c</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.0</td>
<td>10.0</td>
<td>10.0</td>
</tr>
</tbody>
</table>

```java
double a, b, c, d, e;
a = b = c = d = e = 2.5;
a *= 2;
b /= 2;
c %= 2;
d += 2;
e -= 2;
```

<table>
<thead>
<tr>
<th>a</th>
<th>b</th>
<th>c</th>
<th>d</th>
<th>e</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.0</td>
<td>1.25</td>
<td>0.5</td>
<td>4.5</td>
<td>0.5</td>
</tr>
</tbody>
</table>

```java
double amount = 100.0;
// add 5% interest
amount += amount * 0.05;
```

<table>
<thead>
<tr>
<th>a</th>
</tr>
</thead>
<tbody>
<tr>
<td>105.0</td>
</tr>
</tbody>
</table>

```java
double a = 4, b = 3, c;
a += b *= c = 2;
```

<table>
<thead>
<tr>
<th>a</th>
<th>b</th>
<th>c</th>
</tr>
</thead>
<tbody>
<tr>
<td>10.0</td>
<td>6.0</td>
<td>2.0</td>
</tr>
</tbody>
</table>
## Exercises

### What’s the final value of `x`?

1. `x = 1.0;
   x += 2 + 2 * 2 - 2.0 / 2.0;`

### What’s the final value of `x` and `y`?

2. `x = 4;
   y = 2;
   x /= y--;`

3. `x = 4;
   y = 2;
   x /= --y;`

4. `x = 2;
   y = 10;
   x *= y + 2;`

5. `x = 2;
   y = 10;
   x *= y / 2;`

6. `x = 2;
   y = 10;
   x *= y % 2;`

7. `x = 2;
   y = 10;
   x *= y % 4;`

8. `x = 2;
   y = 10;
   x *= y += 4;`