

Run the code below to see all the operators in action. Do all of those operators do what you expected? What about 2 / 3? Isn't it surprising that it prints 0? See the note below.

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```

1 //Code by Akshat Garg
2 public class Test1
3 {
4     public static void main(String[] args)
5     {
6         System.out.println(2 + 3);
7         System.out.println(2 - 3);
8         System.out.println(2 * 3);
9         System.out.println(2 / 3);
10        // == is to test while = is to assign
11        System.out.println(2 == 3);
12        System.out.println(2 != 3);
13    }
14 }
15
16

```

```

5
-1
6
0
false
true

```

Result	Expected	Actual	Notes
Pass	5	5	Expected output from main
	-1	-1	
	6	6	
	0	0	
	false	false	
	true	true	

You got 1 out of 1 correct. 100.00%

Activity: 1.4.4.1 ActiveCode (loop1)

In the example below, try to guess what it will print out and then run it to see if you are right. Remember to consider operator precedence. How do the parentheses change the precedence?

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```

1 //Code by Akshat Garg
2 public class TestCompound
3 {
4     public static void main(String[] args)
5     {
6         System.out.println(2 + 3 * 2);
7         System.out.println((2 + 3) * 2);
8         System.out.println(2 + (3 * 2));
9     }
10 }
11
12

```

```

8
10
8

```

Result	Expected	Actual	Notes
Pass	8	8	Expected output from main
	10	10	
	8	8	

You got 1 out of 1 correct. 100.00%

Activity: 1.4.4.2 ActiveCode (compound1)

1.4.4 Operators ^

In the example below, try to guess what it will print out and then run it to see if you are right.

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```

1 //Code by Akshat Garg
2 public class Test1
3 {
4     public static void main(String[] args)
5     {
6         System.out.println(11 % 10);
7         System.out.println(3 % 4);
8         System.out.println(8 % 2);
9         System.out.println(9 % 2);
10    }
11 }
12
13

```

```

1
3
0
1

```

Result	Expected	Actual	Notes
Pass	1	1	Expected output from main
	3	3	
	0	0	
	1	1	

You got 1 out of 1 correct. 100.00%

Activity: 1.4.5.2 ActiveCode (loop2)

Check Your Understanding

1-4-10: What is the result of 158 % 10?

☐ A. 15

☐ B. 16

☒ C. 8

Check Me Compare me

✓ When you divide 158 by 10 you get a remainder of 8.

Activity: 1.4.5.3 Multiple Choice (q3_4_1)

1-4-11: What is the result of 3 % 8?

☒ A. 3

☐ B. 2

☐ C. 8

Check Me Compare me

✓ 8 goes into 3 no times so the remainder is 3. The remainder of a smaller number divided by a larger number is always the smaller number!

Activity: 1.4.5.4 Multiple Choice (q3_4_2)

1.4.5 Modulo Operator ^

Calculate your age and your pet's age from the birthdates, and then your pet's age in dog years.

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Reformat

Pair?

```
1 //Code by Akshat Garg
2 public class Challenge1_4
3 {
4     public static void main(String[] args)
5     {
6         // Fill in values for these variables
7         int currentYear = 2024;
8         int birthYear = 2008;
9         int dogBirthYear = 2010;
10
11        // Write a formula to calculate your age from the currentYear and
12        // your birthYear variables
13        int age = currentYear - birthYear;
14
15        // Write a formula to calculate your dog's age from the currentYear
16        // and dogBirthYear variables
17        int dogAge = currentYear - dogBirthYear;
18
19        // Calculate the age of your dog in dogYears (7 times your dog's age
20        // in human years)
21        int dogYearsAge = dogAge * 7;
22
23        // Print out your age, your dog's age, and your dog's age in dog
24        // years. Make sure you print out text too so that the user knows what
25        // is being printed out.
26
27        System.out.println("Your age is " + age + " years!");
28        System.out.println("Your dog's age is " + dogAge + " years!");
29        System.out.println("Your dog's age in dog years is " + dogYearsAge + " years!");
30    }
31 }
32 }
33 }
```

Your age is 16 years!

Your dog's age is 14 years!

Your dog's age in dog years is 98 years!

Result	Expected	Actual	Notes
Pass	true	true	Checking that code contains formula for age
Pass	true	true	Checking that code contains formula for dogAge
Pass	true	true	Checking that code contains formula for dogYearsAge using dogAge
Pass	1+ characters	90	Checking that you have some output
Pass	At least one	3	Checking that you have at least one print statement
Pass	true	true	Checking that you initialized the three variables

You got 6 out of 6 correct. 100.00%

Activity: 1.4.6.1 ActiveCode (challenge1-4)

1.4.6 Dog Years Calculator ^