

Model 1 Relational Operators

In the meta activity, you determined the top three attributes by comparing percentages. We can declare variables to represent these percentages in Java:

```
double written = 82.0;    // Communication skills (written)
double problem = 80.9;    // Problem-solving skills
double teamwork = 78.7;   // Ability to work in a team
```

In the table below, determine the result of each expression and identify the operator. The first five rows are completed for you. (Optional: Use *JShell* to check your work.)

Expression	Result	Operator
written	82.0	none
written > problem	true	>
problem < teamwork	false	<
teamwork = 79.5	79.5	=
teamwork == 78.7	false	==
82.0 < written		
82.0 > written		
82.0 == written		
problem == written		
teamwork == problem		
teamwork = problem		
teamwork == problem		
teamwork		

Questions (15 min)

Start time:

1. A *relational operator* compares two values; the result is either **true** or **false**. Identify the three relational operators used in the table above.
2. Explain why the same expression `teamwork == problem` resulted with two different values in the table.

3. What is the difference between = and == in Java?

4. The != relational operator means “not equals”. Give an example of a boolean expression that uses != and evaluates to false.

5. The >= relational operator means “greater than or equal to”. Give an example of a boolean expression that uses >= and evaluates to true.

6. Java has six relational operators. Only five have been shown, but you should be able to guess the sixth. List all six below, and explain briefly what each one means.