For Friday

- Read Becker, 7.4
- Recommended practice problems:
  - Chapter 7, problems 7-10

Program 5

- Any questions?

Questions before the quiz?

Quiz

Practice

- Give the value of **int** variable **ans**

1. **ans = 5 / 3;**
2. **ans = 5 % 3;**
3. **ans = (3 / 2) * 2;**
4. **ans = 3 / 4;**
5. **ans = 17 % 4;**
6. **ans = 14 – 10 / 2 + 8;**

Practice

- Give the value of **int** variable **ans**

7. **ans = (14 – 10) / 2 + 8;**
8. **ans = 14 – 10 / (2 + 8);**
9. **ans = 4 / 7;**
10. **ans = 12 % 2;**
11. **ans = 25 % 7;**
12. **ans = 7 / 2;**

Practice

- Give the value of **double** variable **val**

13. **val = 7 / 2;**
14. **val = 7.0 / 2;**
15. **val = 3 + 1 / 2.0;**
16. **val = 3 / 2 * 2.0;**

Equality and Floating Point

- Cannot rely on two floating point values to be equal.
- Why?
- How can we handle it?

Type Conversion

NumberFormat

Boolean variables

Character Variables

The String Class

toString

Common String Methods

- charAt
- compareTo
- equals
- indexOf
- length
- startsWith
- replace
- substring
- toLowerCase
- toUpperCase
- trim
- reverse

- Write a **method** to compute the sum of all integers between first and second (including first and second), where first and second are integers and first <= second. The method should return the sum. You may not change the value of either first or second.

- Write a method to find the smaller of two integers. The method will accept two integers and return the smaller of the two. If they are the same, then the method returns either one of them.

- Telephone company rules to calculate the cost of a long distance call are as follows.
  - If the cost of the call is over 60 minutes, the cost is 7 cents per minute.
  - If the call is over 20 minutes long, the cost is 10 cents per minute.
  - If the call is 20 minutes or less, the cost is 13 cents per minute.
- Write a method that takes the length of a call in minutes and returns the per minute rate for that call.

- A carpenter computes the price of a desk as follows:
  - The charge for all desks is a minimum of $200
  - If the surface (length * width) is over 750 square inches, add $50
  - If the wood code is 1 (mahogany), add $100. If the wood code is 2, add $75. If the wood code is 3 (pine), there is no extra charge.
- Write a method that takes the surface of a desk and the wood code and returns the cost of the desk.

- A company gives bonuses based on production as follows:
  - 1000 units or fewer, the bonus is $25
  - 1001 to 3000 units, the bonus is $50
  - 3001 to 6000 units, the bonus is $100
  - 6001 units and up, the bonus is $200
- Write a method that accepts the number of units produced and determines the bonus for the employee. Return the bonus.

- Write a method to determine the purchaser's discount based on a code.
  - If the code is 7, the discount is 10%.
  - If the code is 3, the discount is 15%.
  - If the code is 12, the discount is 4%.
  - If the code is 1, there is no discount.
  - If the code is 8, the discount is 30%.
- The method should return the discount. Use a switch statement.