Peer Instruction #1: Variables and Output
Traditional Class Structure

Lecture
- First Exposure

Textbook
- Read Hard Stuff

Homework
- Practice Hard Stuff

Exam
- Show Knowledge Mastery
Inverted Class Structure

- Textbook
- Reading Quiz
- Peer Instruction
- Labs
- Homework
- Exam
  - Show Knowledge Mastery

CS 160, Fall Semester 2014
But that’s a radical change

Not easy to do all at once!

- Requires many quizzes to enforce reading
- Is reading a textbook as good as a lecture?

So, here’s our first step:

- Two lectures and one peer instruction
- Two recitations (labs) per week
Nuts and Bolts: The process

- A (somewhat) difficult question will be projected.
- Individually choose an answer and submit.
- Instructor will close poll, without showing results.
- Discuss your answer with your peers.
- In your group, choose an answer and submit.
- Instructor will lead discussion, and show results.
What is the difference between the primitive types shown below?

byte, short, int, long

A. No difference except for the names!
B. Each type has a different size in memory.
C. Some types are signed, some are unsigned.
D. Some represent integers, others real numbers.
E. None of the above.
Which of the following lists completely follows the rule for identifier syntax?

A. file0, _string, 123name, %real0
B. file1, string, float1, real.com
C. file2, string, _name123, $real1
D. file3, _string, a872989, float
E. None of the above
Which of the following variable declarations will not compile?

A. int i0 = 7809;
B. int i1 = 344.687;
C. double d0 = 335577;
D. double d1 = 34.4593092349;
E. All of the above

Type Mismatch
Which of the following type casts is needed to make the statement compile?

A. int i0 = (short) 45;
B. int i1 = (float) 34264;
C. int i2 = (byte) '@';
D. int i3 = (int) 7962.25;
E. All of the above
Which of the following will compile and correctly print the value of the variable?

```java
int myValue = 123456;
A. System.out.println("value = " + MyValue);
B. System.out.println("Value = " + myValue);
C. System.out.Println("value = " + myValue);
D. system.out.println("value = " + myValue);
E. None of the above
```
What is the value of the variable answer after the following code is executed?

```java
int answer = 18 / 4 + 22 / 5 + 11 % 3 + 7 % 5;
```

A. 10  
B. 10.5  
C. 11  
D. 11.5  
E. None of the above
What is the value of the variable answer after the following code is executed?

```java
int answer = 9 + 13 / 4 - 2 * 7 % 3 + 5;
```

A. 13  
B. 14  
C. 15  
D. 16  
E. None of the above

**Precedence Rules**
What will the following code print?

```java
System.out.printf("%.5f\n", 5.123456789);
```

A. 5.123456789  
B. 5.12345  
C. 5.12346  
D. .12345  
E. None of the above