Name: _____ Session: AM / PM
Circle one

Chapter 2 - Day 2

Calculations, Constants, and Strings

ARITHMETIC OPERATORS

+	-	*	/	%

Modulus (%) returns the _____ after division. Example: 17 % 3 = _____
A common use for % 2 is checking whether a whole number is _____ or _____.

INTEGER DIVISION AND PRECEDENCE

When both operands are integers, Java performs _____. The decimal portion is _____, not rounded.

Expression	Result	Why?
10 / 3		
5 / 2		

Java follows familiar order of operations. Equal-precedence operators are evaluated _____ to _____.

Expression	Final value
12 + 6 / 3	
(12 + 6) / 3	

COMBINED ASSIGNMENT OPERATORS

Shorthand operators combine a calculation with an assignment: += -= *= /= %=

Rewrite x = x * 3 using shorthand: _____

CHAPTER 2 - DAY 2

Conversions, constants, and Strings

TYPE CONVERSION

Conversion	When Does It Happen	What to remember
Widening int → double		
Casting		

Cast placement matters. Explain why these differ:

```
double wrong = (double)(5 / 2);
double correct = (double)5 / 2;
```

wrong = _____ **correct = _____**

Why? _____

In mixed expressions, the widest type wins: **double > float > long > int**

NAMED CONSTANTS

The keyword **final** marks a variable as _____ after initialization.

Constant names usually use _____ with underscores between words. Java also provides built-in constants such as Math.PI.

```
final double TAX_RATE = 0.06;
double area = Math.PI * radius * radius;
```

THE STRING CLASS

Java has no primitive type for text; it uses the _____ class. String is a _____ type.

Method	Returns	Remember
length()		
charAt(index)		indexing begins at _____
toUpperCase()		
toLowerCase()		

```
String student = "alex";
student.toUpperCase();
System.out.println(student);
```

What prints? _____ To actually store uppercase text: student = _____