

Section Activity #2: Expression Evaluation

Your Names: _____

Directions: In groups of two (or three, if need be), complete the following activity. This section activity will be graded; all students in the group will receive the same score. Make sure that the names of all group members are on the page you submit to your section leader. Section Meeting 3 (2014/01/29-30)

Task: Evaluate the following Java expressions, according to Java's rules for expression evaluation, using the given variables and their values as input. For each expression, state the value that results AND the type of the result. (No, you can't run Java to find out.) The Java operator precedence and associativity table is given on the back side.

```
byte b = 126;          float f = 0.5, g = 27;  
int i = 4, j = 17, k = -9;  double d = 0.25, e = -4.75;
```

	Expression	Result Value	Result Type
(a)	<code>k / i</code>		
(b)	<code>j / d</code>		
(c)	<code>i % j</code>		
(d)	<code>b % j</code>		
(e)	<code>j + k * i</code>		
(f)	<code>10 - i * (j - k) / i</code>		
(g)	<code>b + (2 - 3) * 4 / 5 % 6</code>		
(h)	<code>Math.pow(i,f)</code>		
(i)	<code>b - g</code>		
(j)	<code>j * f</code>		
(k)	<code>b + (int)e</code>		
(l)	<code>b = b</code>		

Java Operator Precedence and Associativity Table

Precedence	Operators	Associativity
Highest	() [] .(member selection) ++ -- +(unary) -(unary) ~ ! ()(cast) new * / % + - +(concatenation) << >> >>> < <= > >= instanceof == != ==(object) !=(object) &(integral) &(boolean) ^(integral) ^(boolean) (integral) (boolean) && ?:	L to R R to L L to R L to R L to R L to R L to R L to R L to R L to R L to R L to R L to R
Lowest	= *= /= %= += -= <<= >>= >>>= &= ^= =	R to L