

# CSE 8A Lecture 21

- LAST lecture on Friday!
- PSA 9 interviews due by Thursday
- SMarx extra final exam office hours Fri 3/15 11:15am-1pm EBU-3B #2206
- **Review Exam #4** Statistics
  - **Median: 72.5% (14.5/20)**
    - **High: 100% (5 students) WOW!**
    - **90% or above - 59 students (20% of the class) - GOOD job!**
  - **CSE 8a class Median: 86.2%**
    - **High: 100.8% (11 students)**
    - **90% or above 103 students (34% of the class)**
- Reminder PASSING (C-) is 70% and above
- Verify grades on [gradesource.com](https://gradesource.com)

# Studying for the final (again)

1. Redo (i.e. write out on paper):

A. Interim Exam #1-#4 and Exam practice problems

B. PI (clicker) questions

B. Lab quiz questions

C. Reading quiz questions

Do this **WITHOUT** looking at the book. If you get stuck, **STOP**. Reread the relevant material in the book, maybe peek at the answer, then put the book away and try again

2. Get together with your friends (or post on Piazza for a group) and come up with new study questions. Then do those (using the same method)

## Exam 4: 1) What gets printed?

```
System.out.println( ( 7 - 5 % 3 + 7 / 2 ) );
```

```
System.out.println(( 6 - 5 % 3 + 7 / 2 ) );
```

```
System.out.println(( 5 - 5 % 3 + 7 / 2 ) );
```

```
System.out.println( ( 3 != 3 || !true ) && ( 4 > 1 + 3 ) );
```

```
System.out.println( ( 3 != 3 || !true ) && ( 4 > 2 + 3 ) );
```

```
System.out.println( ( 3 != 3 || !true ) && ( 4 > 1 + 2 ) );
```

Table of Precedence and Associativity

Operators	Associativity
- (unary)    ++    --    !	right to left
*    /    %	left to right
+    -	left to right
<    <=    >    >=	left to right
==    !=	left to right
&&	left to right
	left to right
=    +=    -=    *=    /=	right to left

## Exam 4: 2) What gets printed?

```
a)  int friday = 5;
    do
    {
        System.out.println(friday);
    } while( friday-- > 2 );
```

---

```
b)  int friday = 6;
    do
    {
        System.out.println(friday);
    } while( friday-- > 3 );
```

---

```
c)  int friday = 7;
    do
    {
        System.out.println(friday);
    } while( friday-- > 4 );
```

**Exam 4:** 3) Write a nested for loop that displays a right triangle as shown, with side length of 5, using "System.out.print()" and "System.out.println()"

**OUTPUT:**

```
  XX
 XXXX
XXXXXX
XXXXXXXXX
```

```
XXXXXXXXXX
 XXXXXXXXX
  XXXXXXXXX
   XXXXXXXXX
    XXXXXXXXX
     XXXXXXXXX
```

```
XXXXXXXXXX
 XXXXXXXX
  XXXXX
   XXX
    XX
```

```
for (                                     )
```

**Exam 4:** 4) Rewrite the given code segment, using logical operators and only ONE if-else statement to compute the same with the given assigned values.

a) <code>int j = 1;</code>	<code>// c) int j = 2;</code>
<code>while( j &lt; 5 )</code>	<code>// while( j &lt; 6 )</code>
<code>if( j &gt; 0 )</code>	<code>// if( j &gt; 1 )</code>
<code>if( j &lt; 4 )</code>	<code>// if( j &lt; 5 )</code>
<code>System.out.println( ++j );</code>	
<code>else</code>	
<code>System.out.println( j += 2 );</code>	
b) <code>int j = 5;</code>	
<code>while( j &lt; 10 )</code>	
<code>if( j &gt; 4 )</code>	
<code>if( j &lt; 9 )</code>	
<code>System.out.println( ++j );</code>	
<code>else</code>	
<code>System.out.println( j += 2 );</code>	

**Exam 4:** 6) FILL in the blanks with a **do** loop using logical operators that repeats prompting for input (see **OUTPUT**), while the character value is a 'y' or 'Y'.

```
char answer = 'n';
```

```
_____  
{  
    // do loop repeats while answer is 'y' or 'Y'  
    System.out.print("Want to repeat program (y/n)? ");  
    // Code reads user character input into answer  
}_____;
```

## OUTPUT:

```
Want to repeat program (y/n)? y  
Want to repeat program (y/n)? Y  
Want to repeat program (y/n)? x
```

## Exam 4: 7) What gets printed?

```
class E4d
{
    public static void main(String [] args)
    {
        String time = "Deja Vu";
        System.out.println( dst(4.4) );
        prt( );
        prt( 'Z' );

        time = dst();
        prt( "dst" );
        System.out.println( time );
    }

    public static void prt( )           { System.out.println("dst"); }
    public static void prt( double x ){ System.out.println(x); }
    public static void prt( int      k ){ System.out.println(k); }
    public static void prt( char     a ){ System.out.println(a); }
    public static void prt( String s ){ System.out.println(s); }

    public static _____ dst( )           { return "A++"; }
    public static _____ dst( int k )     { return 3.14; }
    public static _____ dst( double x ){ return 'A'; }
}
```



## Exam 4: 7) What gets printed?

```
class E4d
{
    public static void main(String [] args)
    {
        String time = "Deja Vu";
        prt( "dst" );
        System.out.println( dst(4.4) );
        prt( 3 );

        time = dst();
        System.out.println( dst(8) );
        prt( );
    }

    public static _____ dst( double x ){ return 'A'; }
    public static _____ dst( )          { return "A++"; }
    public static _____ dst( int k )     { return 3.14; }

    public static void prt( )                { System.out.println("dst"); }
    public static void prt( double x ){ System.out.println(x); }
    public static void prt( int k ){ System.out.println(k); }
    public static void prt( char a ){ System.out.println(a); }
    public static void prt( String s ){ System.out.println(s); }
}
```

## Exam 4: 7) What gets printed?

```
class E4d
{
    public static void main(String [] args)
    {
        String time = "Deja Vu";
        System.out.println( time );
        System.out.println( dst(4.4) );
        prt( 3 );

        time = dst();
        System.out.println( dst(8) );
        prt( '+' );
    }

    public static void prt( )          { System.out.println("dst"); }
    public static void prt( double x ){ System.out.println(x); }
    public static void prt( int      k ){ System.out.println(k); }
    public static void prt( char     a ){ System.out.println(a); }
    public static void prt( String s ){ System.out.println(s); }

    public static _____ dst( int k )    { return 1.23; }
    public static _____ dst( )          { return "A++"; }
    public static _____ dst( double x ){ return 'X'; }
}
```

**Exam 4: 6)** WRITE a method in the Picture class that copies all of the passed source picture into the current picture scaled down (half as big).

```
public void copyPicSmaller( Picture sourcePic )
{
    int    sourceX = 0, sourceY = 0, targetX = 0, targetY = 0;

    int    width = sourcePic.getWidth(), height = sourcePic.getHeight();

    Pixel sourcePixel = null, targetPixel = null;

    // refer to page 162 in text book

}
```

# TODO

- Study!
- **Final Exam**
  - A00 Fri 3/15 8-10am Pepper Cyn 106
  - B00 Wed 3/13 11:30am-1:30pm TBA