MATH CLASS WORKSHEET YOUR NAME: SHYAAN KHAN

Visit the following Math class Java API link

http://docs.oracle.com/javase/6/docs/api/java/lang/Math.html

1. What do you notice about the methods in the math class?

- They are all static methods
- All of them return something
- There are a lot of overloaded methods

2. Look up the Java Subset http://www.collegeboard.com/student/testing/ap/compsci_a/java.html

List the five Math methods you are required to know for the AP exam: header of the methods

1. Static int abs(int x)
2. Static double abs(double x)
3. Static double pow(double base, double exponent)
4. Static double sqrt(double x)
5. Static double random()

Write code that will take the square root of x and store the result in y.

Write code that will multiply the value of the integer j times the absolute value of the integer m and then store the result in the integer k.

Is the following legal? If not, what would you do to make it legal?

```
int k = Math.abs(-127.5);
```

Write a statement that will print the result of $2^{1.5}$.

3. int y = Math.sqrt(x);

4. int k = Math.abs(m)*j;

5. Yes it is legal

6. System.out.println(Math.pow(2, 1.5));

7. Convert the equation into Java code (careful with the parenthesis)

$$\frac{-b + \sqrt{b^2 - 4ac}}{2a}$$

Syntax 3.2: Static Method Call

ClassName. *methodName*(*Tparameters*)

Example:

```
Math.sqrt(4)
```

Purpose:

To invoke a static method (a method that doesn't operate on an object) and supply its parameters.

Int quadraticEquation = -(b) + Math.sqrt(Math.pow(b, 2) – (4*a*c))/(2*a);

8. Think about a math equation you may have tried to solve or can solve. Can your math equation/problem be solved using Math methods (Math Class). If so, which ones?

Int areaOfCircle = Math.PI * Math.pow(r, 2);

Math.pow(c, 2) = Math.pow(a, 2) + Math.pow(b, 2);

Int VolOfCylinder = Math.PI * Math.pow(r, 2) * h;