Class Tasks

1. Write Java code that calculates and prints the circumference and area of a circle with a radius of 4 units. [Hint: use Math.PI to get the value of π]

2. Write a Java code where given an integer, we need to print the last 2 digits of that number.

3. Write a Java program that, given a number in inches (you have to declare and initialize it yourself) converts it to meters. Note: One inch is 0.0254 meters.
   Test Data:
   Given a value for inch: 1000
   Expected Output:
   1000 inch is 25.4 meters

4. Write a Java program declaring two integer variables and initializing them. Your task is to swap the values of these two variables. You must complete it using two different approaches.
   a. By creating a third variable.
   b. Without creating any other variables.

Home Tasks

1. Write a Java program to convert minutes into years and days. For simplicity, assume each year consists of 365 days.
   Test Data:
   Given the number of minutes: 3456789
   Expected Output:
   3456789 minutes is approximately 6 years and 210 days

2. Suppose, you have three integer variables: a, b, c. Your first task is to assign the values 2, 5, 8 in these three variables. Next, you need to calculate and display the value of variable d using the following formula:

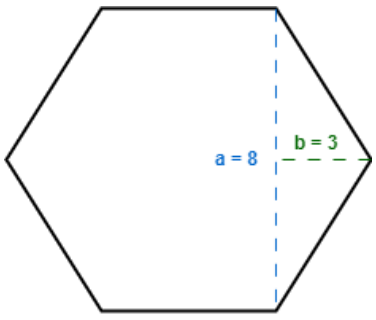
   $$d = (2b \times \frac{c-a}{3}) + 7$$

   Write a Java program based on this mentioned scenario that prints the value of d after calculation. *[Answer: 27]*

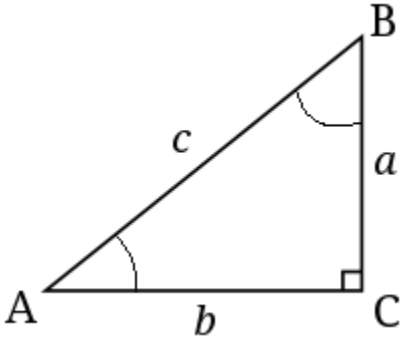
3. Write a Java program that displays the 2 rightmost digits of your student ID in reverse order. For example, if your student id is 23221454, you need to print 4, and then 5.

[Hint: Use the logic you used in one of the tasks in flowchart]

4. Assume a Hexagon where each of the sides are of the same length. From the visualization, we can see the values of *a* and *b* are given. Your task is to write a Java code to find the area and the circumference of the Hexagon.



5. Design a Java program to calculate Sin and Cos values from a right-angled triangle.



Assume the values of a and b are 4.5 and 9.5 respectively. Finally, print the Sin and Cos values of angle A and angle B (SinA, CosA, SinB, CosB). The formulas to calculate these values are given below.

Hint: You need the values for all 3 sides to calculate both sin and cos. You are given only a and b. How would you get the value of c? You'll need the help of Math.sqrt().

Trigonometry formulas			
$\sin(A) = \frac{a}{c}$	$\cos(A) = \frac{b}{c}$	$\sin(B) = \frac{b}{c}$	$\cos(B) = \frac{a}{c}$