Create an android app to accept a number and calculate Factorial, Armstrong, sum of digit and perfect number using menu.

**activity\_main.xml**

<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"  
 xmlns:tools="http://schemas.android.com/tools"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 tools:context=".MainActivity">

<EditText  
 android:id="@+id/inputNumber"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:hint="Enter a number"  
 android:inputType="number"  
 android:layout\_margin="16dp"/>

<Button

android:id="@+id/btnFactorial"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_below="@id/inputNumber"  
 android:layout\_marginTop="8dp"  
 android:onClick="calculate"  
 android:text="Factorial"/>

<Button  
 android:id="@+id/btnArmstrong"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_below="@id/btnFactorial"  
 android:layout\_marginTop="8dp"  
 android:onClick="calculate"  
 android:text="Armstrong"/>

<Button  
 android:id="@+id/btnSumOfDigits"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_below="@id/btnArmstrong"  
 android:layout\_marginTop="8dp"  
 android:onClick="calculate"  
 android:text="Sum of Digits"/>

<Button  
 android:id="@+id/btnPerfectNumber"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_below="@id/btnSumOfDigits"  
 android:layout\_marginTop="8dp"  
 android:onClick="calculate"  
 android:text="Perfect Number"/>

<TextView  
 android:id="@+id/resultText"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_below="@id/btnPerfectNumber"  
 android:layout\_marginTop="16dp"  
 android:text=""  
 android:textSize="18sp"/>

</RelativeLayout>