1 – Using Grid Layout:-

- ## activity_main.xml :-

```xml
<?xml version="1.0" encoding="utf-8"?>
<GridLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:columnCount="4"
    android:rowCount="6"
    android:padding="16dp">

    <!-- Display -->
    <TextView
        android:id="@+id/display"
        android:layout_width="0dp"
        android:layout_height="80dp"
        android:layout_columnSpan="4"
        android:layout_columnWeight="1"
        android:background="#E0E0E0"
        android:gravity="end|center_vertical"
        android:layout_marginTop="10px"
        android:text="0"
        android:textSize="32sp"
        android:padding="10dp" />

    <!-- Row 1 -->
    <Button android:text="7" android:onClick="onNumberClick"
        android:layout_marginEnd="5dp"/>
    <Button android:text="8" android:onClick="onNumberClick"
        android:layout_marginEnd="5dp"/>
    <Button android:text="9" android:onClick="onNumberClick"
        android:layout_marginEnd="5dp"/>
    <Button android:text="/" android:onClick="onOperatorClick"/>

    <!-- Row 2 -->
    <Button android:text="4" android:onClick="onNumberClick"/>
    <Button android:text="5" android:onClick="onNumberClick"/>
    <Button android:text="6" android:onClick="onNumberClick"/>
    <Button android:text="*" android:onClick="onOperatorClick"/>

    <!-- Row 3 -->
    <Button android:text="1" android:onClick="onNumberClick"/>
    <Button android:text="2" android:onClick="onNumberClick"/>
    <Button android:text="3" android:onClick="onNumberClick"/>
    <Button android:text="-" android:onClick="onOperatorClick"/>
```

```xml
    <!-- Row 4 -->
    <Button android:text="0" android:onClick="onNumberClick"/>
    <Button android:text="C" android:onClick="onClearClick"/>
    <Button android:text="=" android:onClick="onEqualClick"/>
    <Button android:text="+" android:onClick="onOperatorClick"/>
    <Button android:text="." android:onClick="onDotClick"/>

</GridLayout>
```

- **MainActivity.java**

```java
package com.example.calculator;

import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.TextView;
import androidx.appcompat.app.AppCompatActivity;

public class MainActivity extends AppCompatActivity {

    TextView display;
    double num1 = 0, num2 = 0;
    String operator = "";
    boolean isNewOperation = true;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);

        display = findViewById(R.id.display);
    }

    // Number button click
    public void onNumberClick(View view) {
        Button btn = (Button) view;

        if (isNewOperation) {
            display.setText(btn.getText().toString());
            isNewOperation = false;
        } else {
            display.append(btn.getText().toString());
        }
    }

    // Dot button click
    public void onDotClick(View view) {
        String current = display.getText().toString();

        if (!current.contains(".")) {
            display.append(".");
        }
```

```java
    }

    // Operator button click
    public void onOperatorClick(View view) {
        Button btn = (Button) view;

        num1 = Double.parseDouble(display.getText().toString());
        operator = btn.getText().toString();
        isNewOperation = true;
    }

    // Equal button click
    public void onEqualClick(View view) {
        num2 = Double.parseDouble(display.getText().toString());
        double result = 0;

        if (operator.equals("+"))
            result = num1 + num2;

        else if (operator.equals("-"))
            result = num1 - num2;

        else if (operator.equals("*"))
            result = num1 * num2;

        else if (operator.equals("/")) {
            if (num2 != 0)
                result = num1 / num2;
            else {
                display.setText("Error");
                return;
            }
        }

        // Remove .0 if result is whole number
        if (result == (long) result)
            display.setText(String.valueOf((long) result));
        else
            display.setText(String.valueOf(result));

        isNewOperation = true;
    }

    // Clear button click
    public void onClearClick(View view) {
        display.setText("0");
        num1 = 0;
        num2 = 0;
        operator = "";
        isNewOperation = true;
    }
}
```

- **Output:-**