**1. Thales' Theorem Activity:**

**Objective:**
Students will apply **Thales' Theorem** to verify proportions and calculate distances or segments in a triangle.

**Step 1: Drawing the Triangle and the Parallel Line**

1. Open **GeoGebra** (on the desktop or online app).
2. Select the **Point Tool** to place three points A, B, and C to create triangle ABC.
3. Use the **Segment Tool** to connect points A, B, and C to form the triangle.
4. Select the **Parallel Line Tool** and draw a parallel line to BC, intersecting the sides AB and AC. GeoGebra will divide the segments so students can observe the application of the theorem.

**Step 2: Verifying Proportions using Thales' Theorem**

1. Use the **Segment Measurement Tool** to measure the segments on the sides of the triangle.
2. Verify the proportion between the segments created by the parallel line: $\frac{AD}{DB} = \frac{AE}{EC}$
3. If the proportions are correct, this confirms that Thales' Theorem holds, and students can check if the line is indeed parallel.

**Step 3: Calculating Distances**

- You can use the **Calculator Tool** in GeoGebra to perform direct calculations of proportions or estimate unknown distances.

**Step 4: Save and Share**

- Once you've created the model, you can save the file and share it with students for them to work on or analyze the solutions.