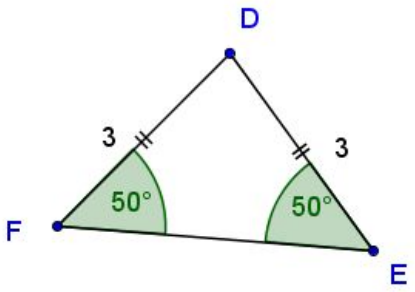
Student Activity Theorem 2

Use in connection with interactive file "Theorem 2" on the Student's CD.



1. Drag the point D to make the measure of the angle DEF 50^o.

   What is the measure of the angle DFE? _____ . Are the two angles equal in measure? _____

   Write down the lengths of the sides DE and DF. Are these lengths equal? _____

2. Drag the point D to make the length of the side DE = 4.
   What is the length of the side DF? _____ .
   Are the two sides equal? _____
   Write down the measures of the angles DEF and DFE.
   DEF = _____, DFE = _____
   Are the measures of the two angles equal? _____

3. Drag the point D to make the measure of the angle DFE = 70^o . What is the measure of the angle DEF? _____ . Are the two angles equal in measure? _____
   Write down the lengths of the sides DF and DE. Are these lengths equal? _____

4. Drag the point D to make the length of the side DF = 8.
   What is the length of the side DE? _____ .
   Are the two sides equal? _____
   Write down the measures of the angles DFE and DEF.
   DFE = _____, DEF = _____
   Are the measures of the two angles equal? _____

5. What conclusion can be drawn from the answers in questions 1, 2, 3, and 4 when

   (i) the sides are equal:

Conclusion_____

(ii) the angles are equal:

Conclusion_____

6. Click on the Tick Box 1 and Tick Box 2 on the interactive file to reveal the wording of this theorem and the converse of this theorem.

   Did you come to these conclusions? _____.