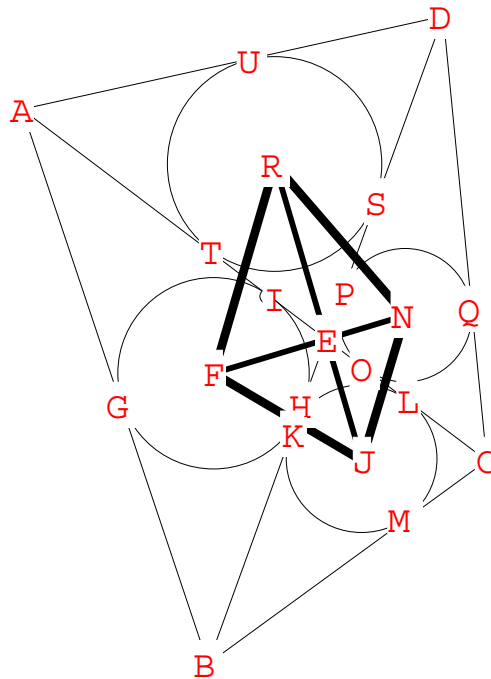


WINGEOM CIRCLES INSCRIBED IN QUADS LAB Name _____

Place drawings, data, and conjectures on the back.



- Shape/Random/Convex Polygon:** input 4 sides. **Btms/seg:** connect diagonals AC and BD. Right click (E) the intersection of the diagonals. **Circle/incircle** of triangles ABE, BEC, CED, DEA. Draw Quad.RFJN by connecting RF, FJ, JN, NR and diagonals RJ and FN. **View/Highlights/color line:** (RFJNR) and RJ, FN (a different color). **Measure:** <REN, FE, EN, RE, EJ. Record drawings and data. Begin conjectures.
- Edit/Macro define/start and stop.** Highlight step 1 by clicking it. Then, click the **start** button. To complete the macro definition, scroll through the list until the last step, highlight it, and press the **stop** button. Click **ok**. **Edit/Macro define/ variables:** A,B,C,D. Click ok. **File/save** this figure. Call it *incircon.ge.2*. Close window.
- Click **2-Dim. Shape/Random/parallelogram. Other/Open Macro/File/Old.** Highlight *incircon.ge2*, **ok**. The construction you just saved should reappear in the macro window. Arrange and size the two windows so that both are visible. On the macro window's menu bar: **Other/Apply macro** (or press F5). Type ABCD into the edit box. **OK. Measure:** <REN, FE, EN, RE, EJ. Record drawing and data. **Edit/Randomize** to reinforce your conjecture.
- Repeat the macro for a square (regular quadrilateral), rectangle, rhombus, trapezoid, isosceles trapezoid, and a kite. [**Edit/All delete** between different quads].

DRAWINGS AND DATA

CONJECTURES

- If ABCD is a convex quadrilateral, then RFJN is a _____.
- If ABCD is a parallelogram, then RFJN is a _____.
- If ABCD is a square, then RFJN is a _____.
- If ABCD is a rectangle, then RFJN is a _____.
- If ABCD is a rhombus, then RFJN is a _____.
- If ABCD is a trapezoid, then RFJN is a _____.
- If ABCD is an isosceles trapezoid, then RFJN is a _____.
- If ABCD is a kite, then RFJN is a _____.