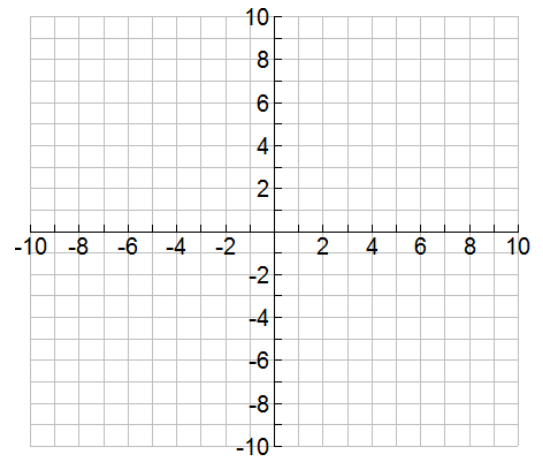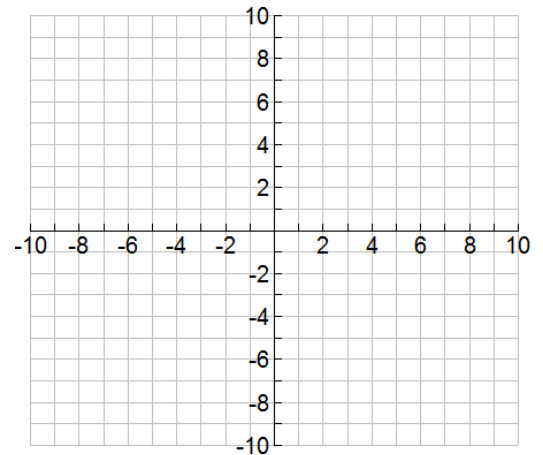# The Proof is in the pudding

Read each statement carefully. Perform any necessary calculations related to slope or distance to verify which shape is given. A graph is given to plot points if needed.
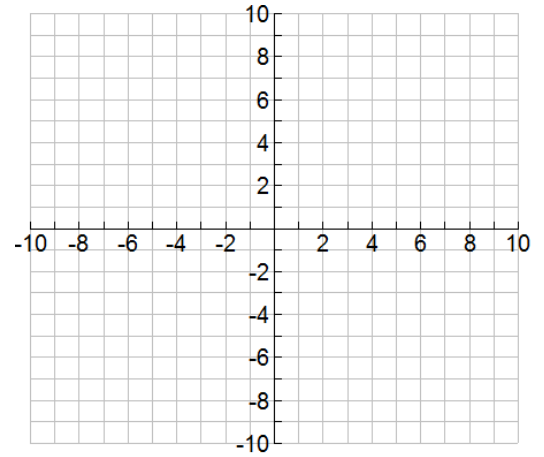
1. Prove that quadrilateral $A(1,2)$, $B(2,5)$, $C(5,7)$ and $D(4,4)$ is a parallelogram.

2. Prove that $A(1,1)$, $B(4,4)$, and $C(6,2)$ are the vertices of a right triangle.

3. Prove that quadrilateral $A(1, -2)$, $B(9, 2)$, $C(4, 7)$ and $D(-2, 4)$ is a trapezoid, but is NOT an isosceles trapezoid.

4. Singer and Maggie see a drawing of quadrilateral $A(2, 2)$, $B(5, -2)$, $C(9, 1)$ and $D(6, 5)$. Singer says the figure is a rhombus, but not a square. Maggie says the figure is a square. Show evidence to support the claims. Who is making the correct observation?