Show all your calculations and explain how these calculations proved if the given coordinates made the specified shape.

1. Prove QRST is a parallelogram	2. Prove MNOP is a rectangle
Q(−1, 4), R(1, 8), S(4, 2), T(2, −2)	M(−6, 1), N(1, 4), O(3, −1), P(−4, −4)
3. Prove BOXI is a square B(0, 0), O(4, 3), X(7, -1), I(3, -4)	<ul> <li>4. What are the coordinates of A that make</li> <li>ABCD a parallelogram? Justify your answer.</li> <li>A(?, ?), B(−2, −2), C(8, 5), D(5,6)</li> </ul>
5. Prove ΔUVW is isosceles.	6. Prove ROMB is a rhombus
U(-4, 7), V(2, 5), W(-2, 1)	R(−6, 7), O(2, 5), M(4, −3), B(−4, −1)