Geometry NAME: _____

WORKSHEET: *Tests for Parallelograms* PERIOD: _____ DATE: _____

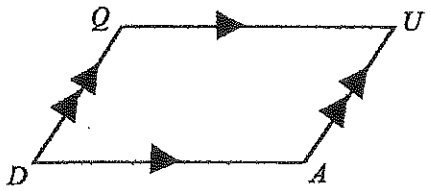
Tests for Parallelograms

A ***Parallelogram*** is defined as a quadrilateral with ***both pairs*** of opposite sides ***parallel.***

Does the given information make the ***QUADRILATERAL*** a ***PARALLELOGRAM?***
If the information does not ***guarantee*** a parallelogram, sketch a counterexample that demonstrates another possible shape having the same characteristics.

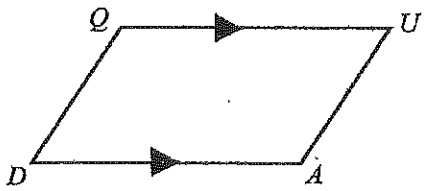
1) Will this always form a parallelogram?

□ **Yes** □ **No (provide a counterexample)**



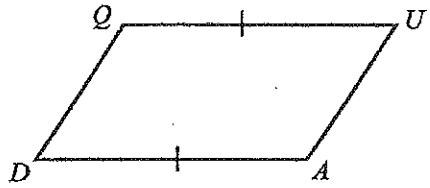
2) Will this always form a parallelogram?

□ **Yes** □ **No (provide a counterexample)**



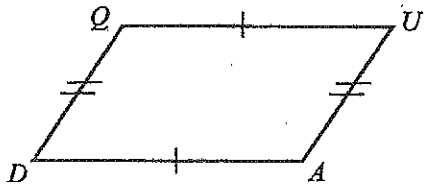
3) Will this always form a parallelogram?

□ **Yes** □ **No (provide a counterexample)**



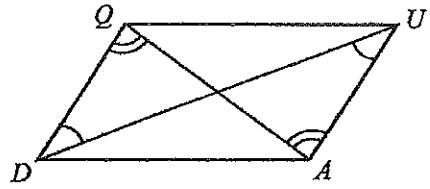
4) Will this always form a parallelogram?

□ **Yes** □ **No (provide a counterexample)**



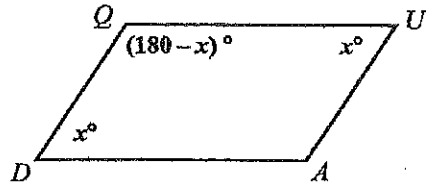
5) Will this always form a parallelogram?

□ **Yes** □ **No (provide a counterexample)**



6) Will this always form a parallelogram?

□ **Yes** □ **No (provide a counterexample)**



Determine whether the figure with the given vertices is a parallelogram. Use the method indicated.

_____7) Quadrilateral BCDE with B(0, 0), C(4, 1), D(6, 5), E(2, 4); **Slope Formula**

$m_{\overline{BC}}$ = _____ $m_{\overline{BE}}$ = _____

$m_{\overline{DE}}$ = _____ $m_{\overline{CD}}$ = _____

_____8) Quadrilateral EFGH with E(-4, -3), F(4, -1), G(2, 3), H(-6, 2); **Midpoint Formula**

$\text{midpoint}_{\overline{EG}}$ = _____

$\text{midpoint}_{\overline{FH}}$ = _____

_____9) Quadrilateral BCEG with B(-6, -3), C(2, -3), E(4, 4), G(-4, 4); **Distance Formula**

BC = _____

EG = _____

BG = _____

CE = _____