Parallelogram Properties Activity

1) Graph parallelogram WHAT with W(-2, 5), H(4,4), A(2, -1), and T(-4,0). Count the rise/run for each side and write on each side. How do you know WHAT is a parallelogram?

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2) Use a half sheet of patty paper and trace WHAT, labeling the vertices with the correct letter. Map ∠W on top of ∠A. Are they congruent? _____ Map ∠H on top of ∠T. Are they congruent? _____

Therefore: Opposite angles of a parallelogram are _____.

3) Now do the same thing with the sides. WH on top of AT. HA on top of WT.

Therefore: Opposite sides of a parallelogram are _____.

4) Draw diagonal WA in your parallelogram. How many triangles do you see? Sum of the angles of a triangle is _____. So what is the sum of the angles inside a quadrilateral? _____. Measure ∠W and ∠H with a protractor and label the degrees. Use what you learned in #2 above to label the other two angles.
What is the sum of ∠W and ∠H? _____ ∠W and ∠T? _____.

Therefore: Consecutive angles in a parallelogram are _____.

5) Now draw diagonal HT in your parallelogram. At what point do the diagonals intersect? _____. Label it X. What is the midpoint of WA? _____ WT?_____.
Do the diagonals share a midpoint? _____ Mark WX ≅ XA and HX ≅ XT.

Therefore: The _____ of a parallelogram bisect each other.

Look back at your Flowchart notes sheet on quadrilaterals. What other quadrilaterals are also parallelograms?

_____, _____, _____

Are all the "therefores" above also true for these three types of quadrilaterals? _____