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Geogebra Lesson: Construction of parallelograms and its properties

1. Construct a line segment using the Segment tool



1. Construct another point (not on the line segment) using the New Point tool



1. Connect point A and C using the Segment tool



1. Construct a parallel line by selecting the Parallel Line tool and click on the point C and the line segment AB.
2. Construct another parallel line by selecting the Parallel Line tool and click on the point B and the line segment AC.



1. Construct a point on the intersection of the two newly constructed parallel lines using the Intersect Two Objects tool
* Make sure this point is labeled as “D”
1. Select the Polygon tool and select the four vertices of the parallelogram



Now let’s look at the six properties of a parallelogram:

* Opposite sides are congruent (AB = DC).
* Opposite angels are congruent (C=B)
* Consecutive angles are supplementary (A + C = 180°).
* If one angle is right, then all angles are right.
* The diagonals of a parallelogram bisect each other.
* Each diagonal of a parallelogram separates it into two congruent triangles.
1. Use the Pen tool to show that opposite sides are congruent



1. Find the angles by using the Angle tool – show congruent angles
2. Show that consecutive angles are supplementary (add up to 180)
3. Move the points around to see different measurements

What happens if one angle is 90 degrees, or right?

1. Draw the diagonals… where do they intersect?