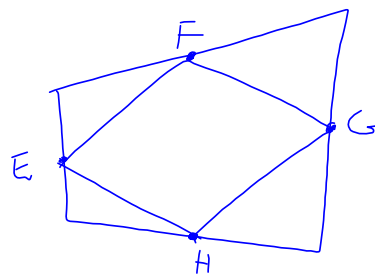
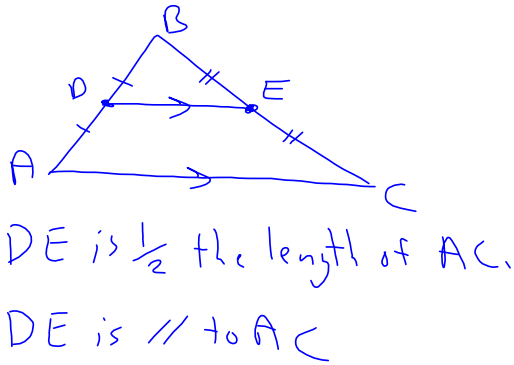


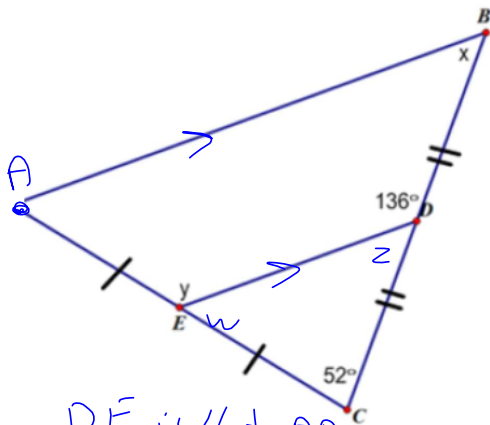
Midpoints and Mid-Segments

A midpoint is a point located at the halfway point of a line segment. If you join 2 adjacent midpoints in a polygon, you create a mid-segment. Here are some rules about mid-segments.



EFGH is always a parallelogram

Examples



DE is \parallel to AB

$$x + 136 = 180^\circ \text{ (C-pattern)}$$

$$x = 44^\circ$$

$$z + 136 = 180^\circ \text{ (supp)}$$

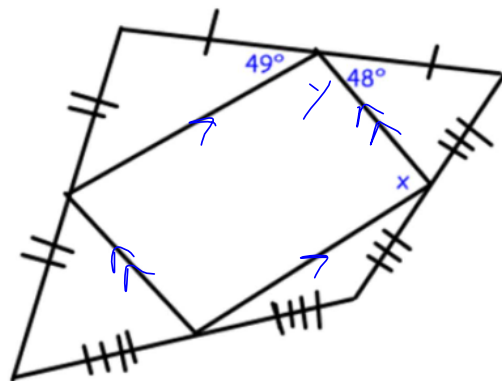
$$z = 44^\circ$$

$$w + 44 + 52 = 180^\circ \text{ (AST)}$$

$$w = 84^\circ$$

$$y + 84 = 180^\circ \text{ (supp)}$$

$$y = 96^\circ$$



$$49 + y + 48 = 180^\circ \text{ (supp)}$$

$$97 + y = 180^\circ$$

$$y = 83^\circ$$

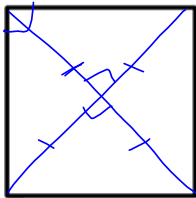
$$83 + x = 180^\circ \text{ (C-pattern)}$$

$$x = 97^\circ$$

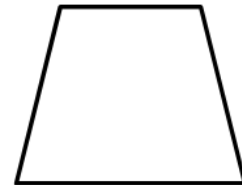
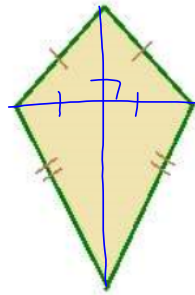
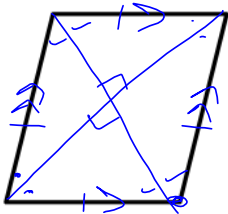
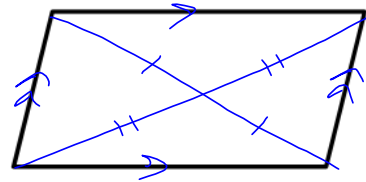
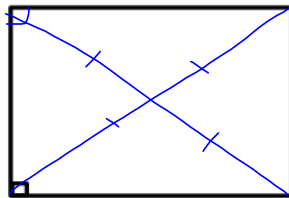
Diagonals of Quadrilaterals

MPM1D

- 1) Identify each quadrilateral by name, by identifying parallel sides, etc.
- 2) Draw the diagonals of each parallelogram.
- 3) Identify properties of the diagonals for each quadrilateral.



square



Quadrilateral	Diagonal Properties
square	diagonals are equal and bisect each other. diagonals are \perp
rectangle	diagonals equal and bisect each other.
parallelogram	diagonals bisect each other.
rhombus	diagonals bisect each other, and bisect the angle. diagonals are \perp .
kite	diagonals are \perp

Text page 378 #6, 8, 9

"Polygons and Parallel Lines" worksheet