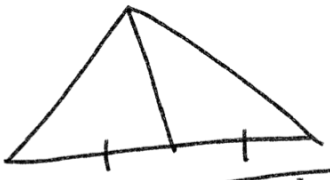
T-G Geometry Week 25 3/21

1.)

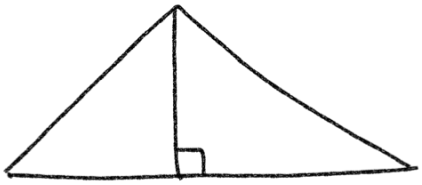


median

2.)

angle bisector

3.)

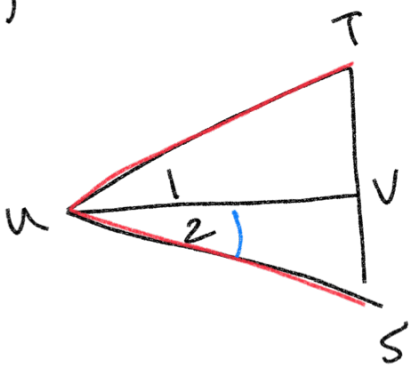


altitude

4.)

perpendicular bisector

5.)



$\overline{UV}$ is an angle bisector

$\measuredangle 2 = 2x + 9$

$\measuredangle SUT = 7x - 6$

$\frac{3x}{3} = \frac{24}{3}$

$\boxed{x = 8}$

$\measuredangle SUT = 2(\measuredangle 2)$

$7x - 6 = 2(2x + 9)$

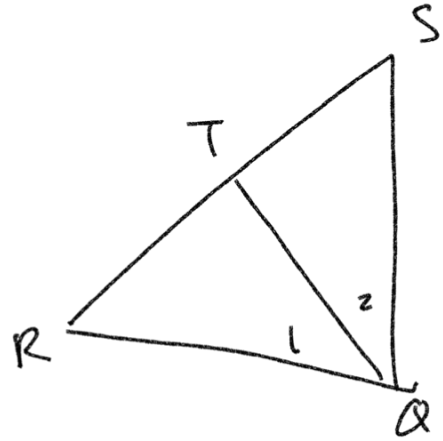
$7x - 6 = 4x + 18$

$-4x \quad -4x$

$3x - 6 = 18$

$+6 \quad +6$

6.)



$\measuredangle 1 = 7x - 7$

$\measuredangle 2 = 5x + 13$

$\overline{TQ}$ is an angle bisector

$\measuredangle 1 = \measuredangle 2$

$7x - 7 = 5x + 13$

$+7 \quad +7$

$7x = 5x + 20$

$-5x \quad -5x$

$\frac{2x}{2} = \frac{20}{2}$

$\boxed{x = 10}$

4 sides

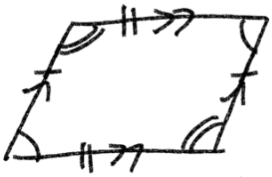
quadrilateral

0 parallel sides

kite

adjacent sides equal

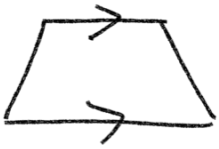
opposite sides & angles congruent



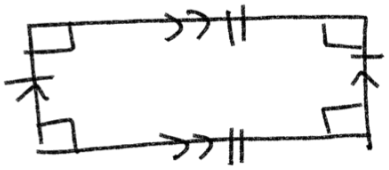
parallelogram

opposite sides & angles congruent

1 parallel side

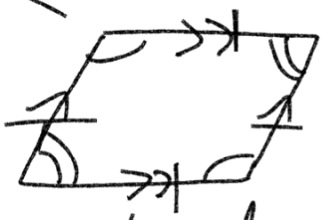


trapezoid



4 equal angles

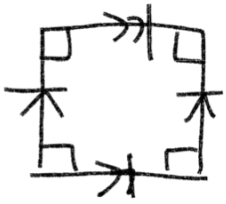
Rectangle



4 equal sides

Rhombus

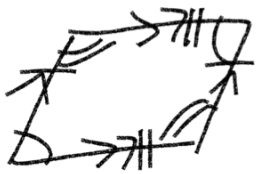
4 equal angles



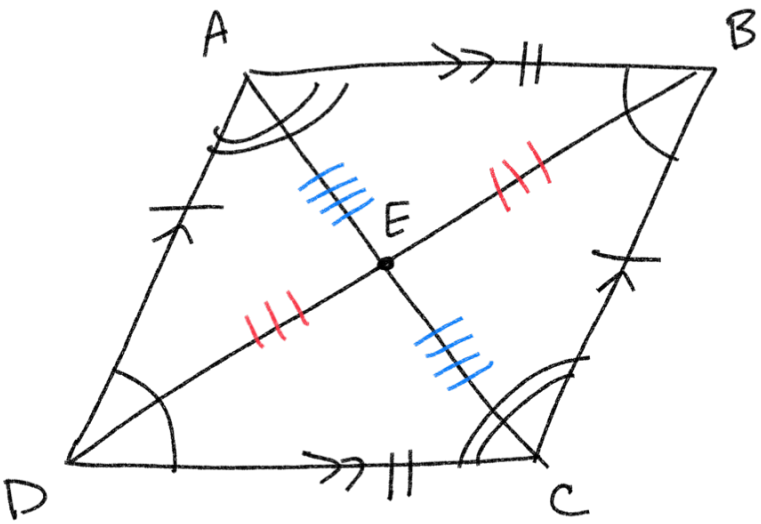
4 equal sides

square

Parallelogram



Diagonals are not equal— but they bisect each other.



$\overline{DE} \cong \overline{EB}$

$\overline{AE} \cong \overline{EC}$

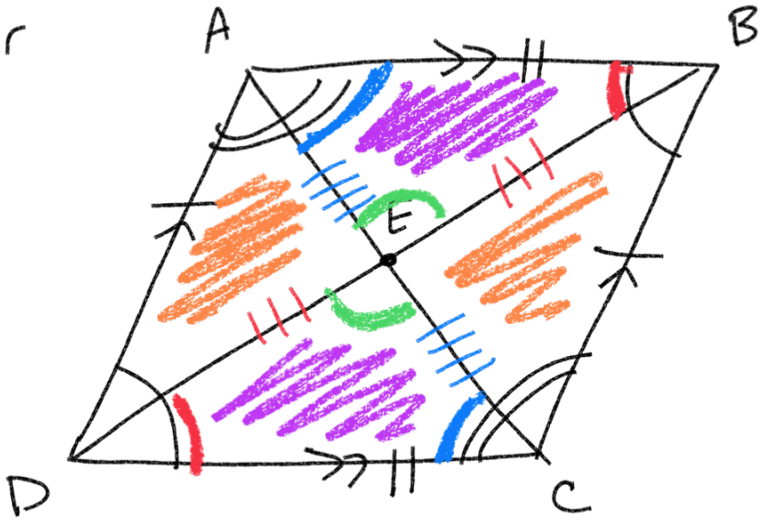
Alternate Interior Angles

$\angle ABE \cong \angle CDE$

$\angle BAE \cong \angle DCE$

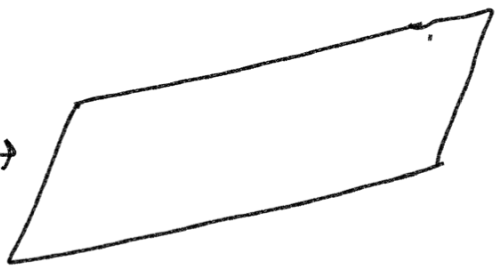
Vertical Angles

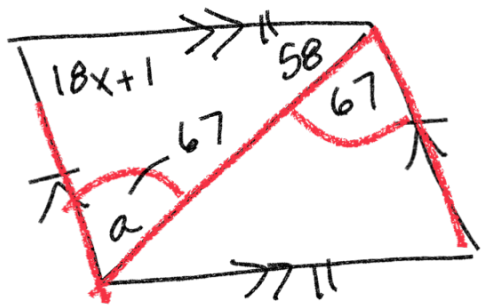
$\angle AEB \cong \angle CED$



2 pairs of congruent triangles

Maya did this →





$a = 67^\circ$ Alt. Int. Angles

$67 + 58 + 18x + 1 = 180$

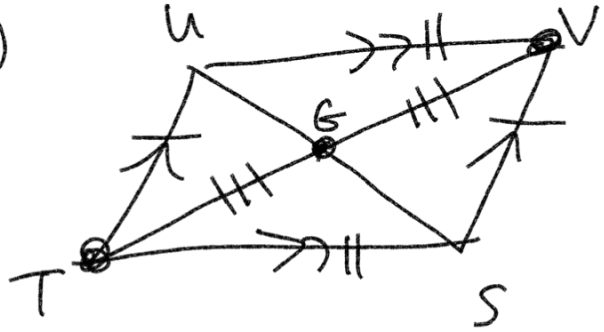
$126 + 18x = 180$

$-126 \quad -126$

$\frac{18x}{18} = \frac{54}{18}$

$\boxed{x = 3}$

1.)



diagonals bisect

$\overline{GV} = 9$

$\overline{TV} = 2x - 2$

$\overline{TV} = 2(\overline{GV})$

$2x - 2 = 2(9)$

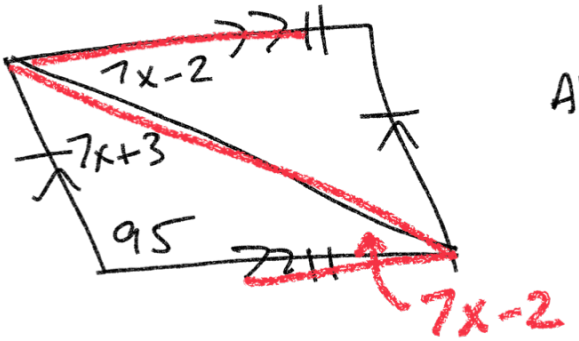
$2x - 2 = 18$

$+2 \quad +2$

$\frac{2x}{2} = \frac{20}{2}$

$\boxed{x = 10}$

2.)



Alternate Interior Angles

$7x + 3 + 7x - 2 + 95 = 180$

$14x + 96 = 180$

$-96 \quad -96$

$\frac{14x}{14} = \frac{84}{14}$

$\boxed{x = 6}$

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