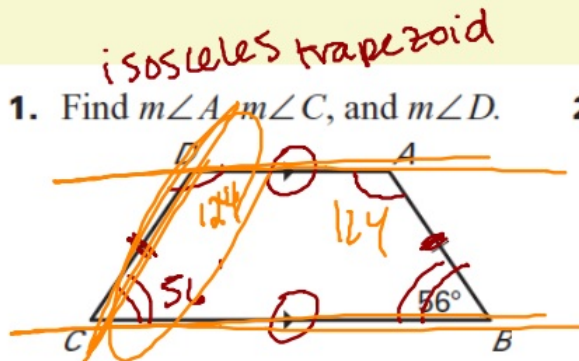


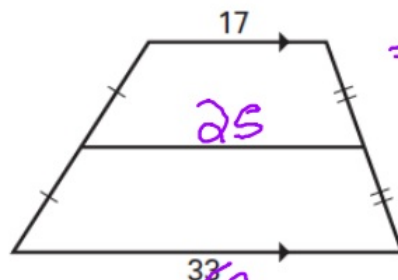
1. What is one of your favorite quotes?



1. Find $m\angle A$, $m\angle C$, and $m\angle D$.

$m\angle C = 56^\circ$
 $m\angle D = 124^\circ$
 $m\angle A = 124^\circ$

2. Find the length of the midsegment of the trapezoid.

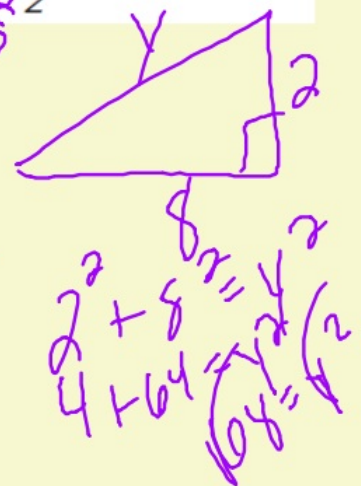
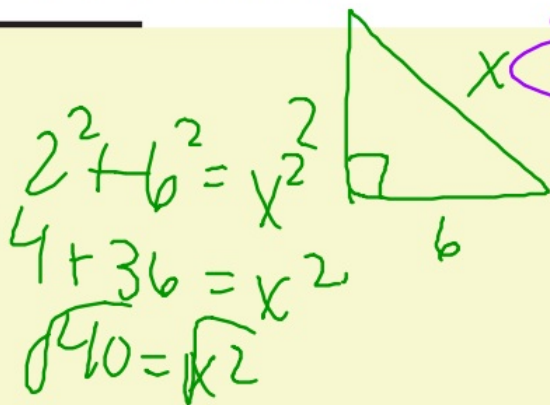
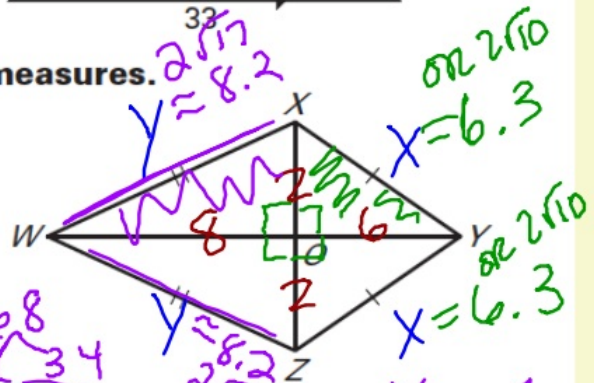


$\frac{1}{2}(33+17)$
 $\frac{1}{2}(50)$
 $= 25$

Use the figure to find the indicated measures.

3. If $m\angle XYZ = 80^\circ$ and $m\angle XWZ = 48^\circ$, find $m\angle YZW$.

4. If $XO = 2$, $OZ = 2$, $YO = 6$, and $OW = 8$, find the lengths of the sides of the kite.



8.6 Identify Special Quadrilaterals

Goal • Identify special quadrilaterals.

Notes

Example 1 Identify quadrilaterals

Quadrilateral $ABCD$ has both pairs of opposite sides congruent. What types of quadrilaterals meet this condition?

Solution

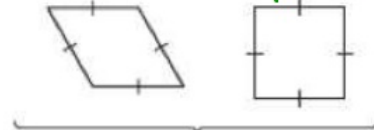
There are many possibilities.

Parallelogram rectangle



Opposite sides are congruent.

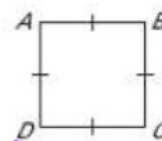
Rhombus Square



All sides are congruent.

Example 2 Identify a quadrilateral

What is the most specific name for quadrilateral $ABCD$?



Solution

Parallelogram (opp sides \cong)

Rhombus (all 4 sides \cong)

Example 3 Identify a quadrilateral

Is enough information given in the diagram to show that quadrilateral $FGHJ$ is an isosceles trapezoid? Explain.



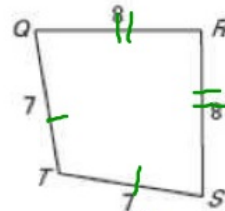
$$\begin{array}{r} 102 \\ + 78 \\ \hline 180 \end{array}$$

~~102~~
~~102~~
~~204~~

- ① It is a trapezoid because there is one pair of opp sides \parallel ($\overline{FG} \parallel \overline{JH}$)
- ② It is an isosceles trapezoid because one pair of base \angle 's are \cong ($\angle F \cong \angle G$)

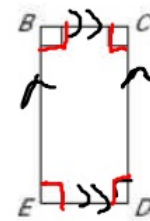
✓ **Checkpoint** Complete the following exercises.

2. What is the most specific name for quadrilateral $QRST$? Explain your reasoning.



Kite
(consecutive sides are \cong)

3. Is enough information given in the diagram to show that quadrilateral $BCDE$ is a rectangle? Explain.



① It's a \square because opp \angle 's are \cong or because opp sides are \parallel .

② It's now a rectangle because it's a \square w/ 4 right \angle 's.

Diagonal	Parallelogram
Rhombus	Rectangle
Square	Trapezoid
Base, legs, and Base angles	Isosceles Trapezoid
Midsegment of a trapezoid	Kite