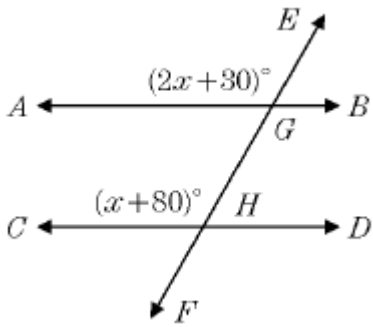
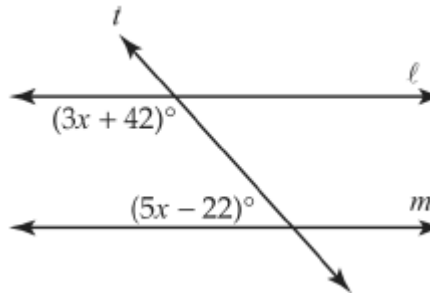


Geometric Properties

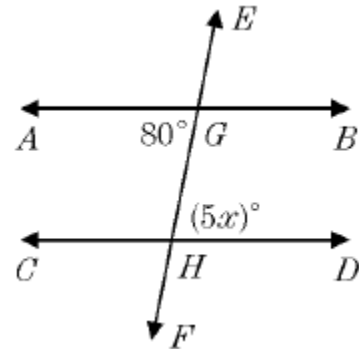
1. Find $m\angle EGA$.



2. Solve for x .

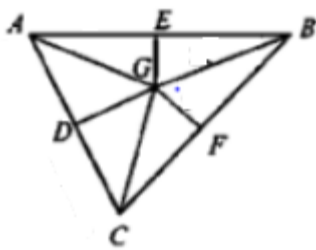


3. Solve for x .

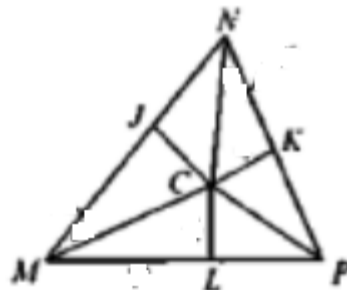


Triangle Centers

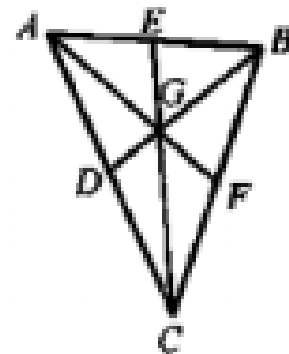
4. G is a circumcenter.
 $AE = 10$, $AC = 40$, $FG = 7$,
 and $BG = 18$



5. C is an incenter.
 $\angle LNK = 37^\circ$, $\angle JML = 50^\circ$,
 $LM = 9$, and $CL = 3$



6. G is a centroid.
 $AG = 20$, $BC = 13$, and $BD = 42$



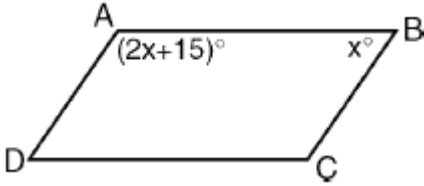
Find:
 $AD =$ _____
 $FC =$ _____
 $EB =$ _____
 $AG =$ _____
 $EG =$ _____

Find:
 $m\angle CML =$ _____
 $m\angle MNP =$ _____
 $m\angle NPC =$ _____
 $JC =$ _____
 $MC =$ _____

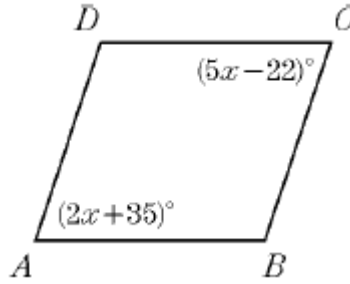
Find:
 $GF =$ _____
 $AF =$ _____
 $BF =$ _____
 $BG =$ _____
 $GD =$ _____

Properties of Parallelograms

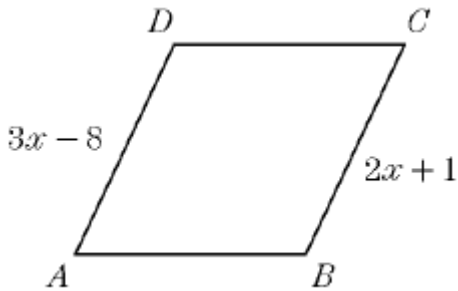
7. Find $m\angle A$



8. Solve for x .

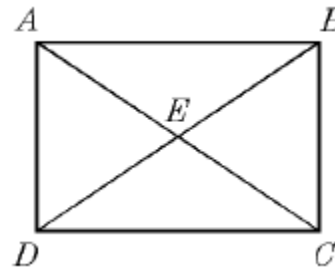


9. Find the length of AD .



10. Solve for x .

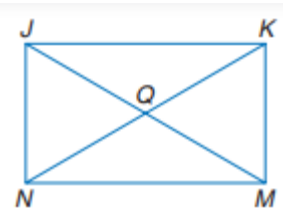
$BD = 8x + 4$ and $BE = 22$



Properties of Rectangles, Rhombuses, and Squares

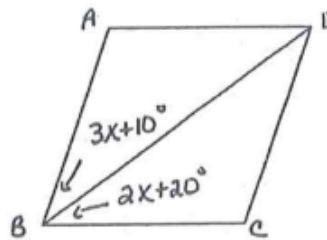
11. Solve for x . $KMNJ$ is a rectangle.

$KN = 3x + 14$ and $JM = 38$



12. $ABCD$ is a rhombus.

Find $m\angle CBD$.



13. $ABCD$ is a rhombus.

$AB = 14$ and $\angle ABE = 32^\circ$.

Find:

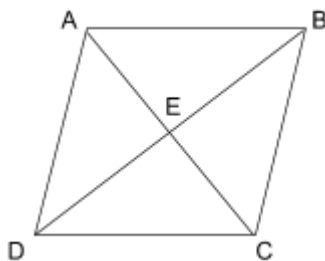
$AD =$ _____

$\angle CBD =$ _____

$\angle CED =$ _____

$\angle CAD =$ _____

$\angle ADC =$ _____



14. $MYSR$ is a square.

$ME = 10$ and $\angle RYS = 3x + 24$

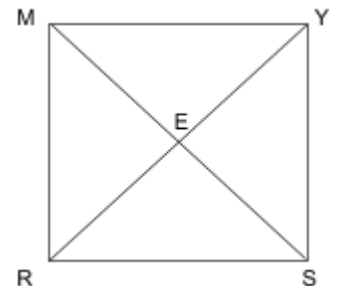
Find:

$x =$ _____

$MS =$ _____

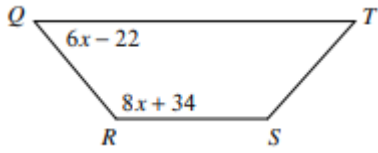
$MR =$ _____

$\angle YES =$ _____

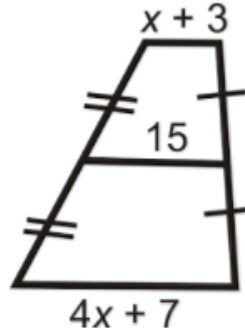


Properties of Trapezoids and Kites

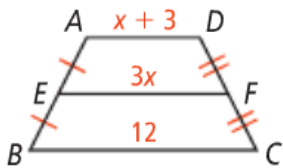
15. Find $m\angle R$. QTSR is a trapezoid.



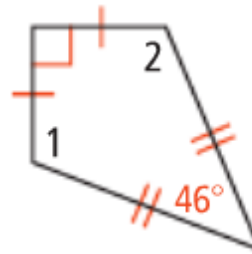
16. Solve for x . Figure is a trapezoid.



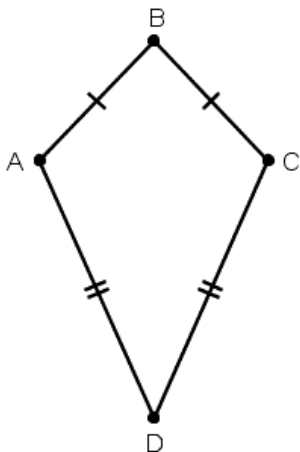
17. Find the length of AD.



18. Find the $m\angle 1$ and the $m\angle 2$.

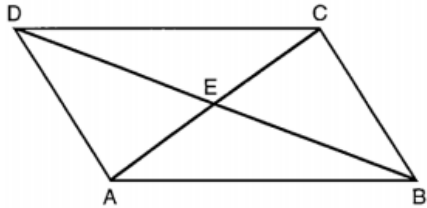


19. Given that $AB = 12$ and $CD = 20$, find the perimeter of the kite.



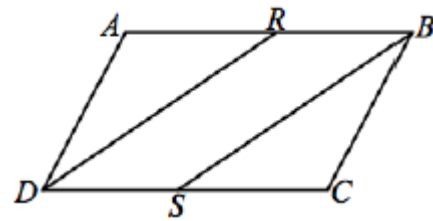
Proofs with Parallelograms

20. Given: ABCD is a parallelogram
 Prove: $\triangle DEA \cong \triangle BEC$



Statement:	Reason:
1.	1. Given
2. $\overline{DA} \cong \overline{CB}$	2.
3. $\angle DAC \cong \angle BCA$	3.
4.	4. Vertical angles
5. $\triangle DEA \cong \triangle BEC$	5.

21. Given: ABCD is a parallelogram, $\overline{AR} \cong \overline{CS}$
 Prove: $\angle ADR \cong \angle CBS$



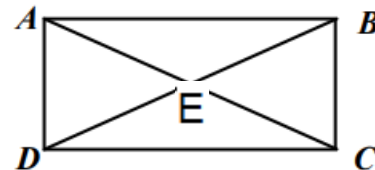
Statement:	Reason:
1.	1. Given
2. $\overline{AD} \cong \overline{CB}$	2.
3. $\angle DAB \cong \angle BCD$	3.
4. $\triangle ARD \cong \triangle CSB$	4.
5. $\angle ADR \cong \angle CBS$	5.

22. Given: ABCD is a parallelogram
 Prove: $\angle DAC \cong \angle BCA$



Statement:	Reason:
1. ABCD is a parallelogram	1.
2. $\overline{AD} \cong \overline{BC}$	2.
3.	3. Opposite sides of parallelogram are congruent.
4.	4. Reflexive property
5. $\triangle DAC \cong \triangle BCA$	5.
6. $\angle DAC \cong \angle BCA$	6.

23. Given: ABCD is a rectangle
 Prove: $\triangle ADE \cong \triangle BCE$



Statement:	Reason
1.	1. Given
2. $\overline{AD} \cong \overline{BC}$	2.
3. $\overline{AB} \parallel \overline{DC}$	3.
4.	4. Alternate interior angles
5. $\angle AED \cong \angle BEC$	5.
6. $\triangle ADE \cong \triangle BCE$	6.