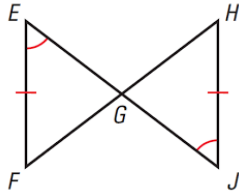
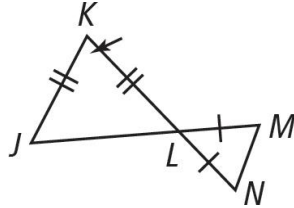


1. What theorem shows that $\triangle EFG \cong \triangle JHG$?

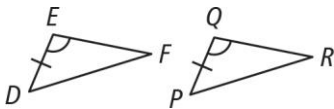


2. What is $m\angle KJL$?

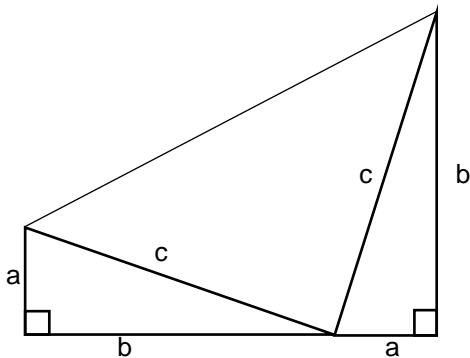


3. What is $m\angle LNM$?

4. What additional piece of information is needed to show that $\triangle DEF \cong \triangle PQR$ by SAS?

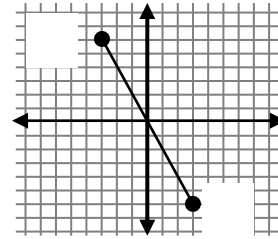


Items 5–6. Refer to the diagram shown.

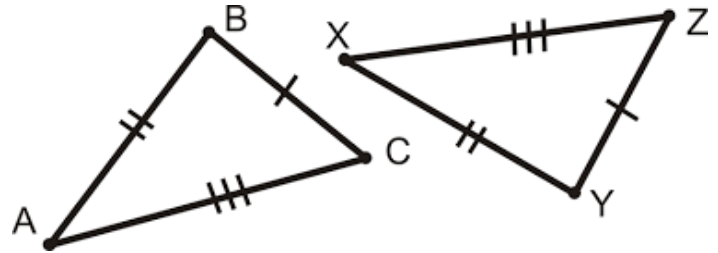


5. What theorems show 2 congruent triangles?
6. Label the vertices and state the corresponding congruent parts.
7. Which theorems prove two triangles are congruent? Name them all.

For Items 8–9, use the graph.

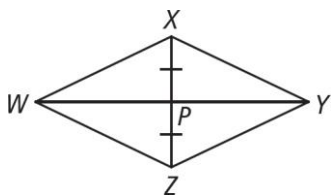


8. What is the length of AB ?
9. What are the coordinates of the point $\frac{1}{3}$ of the way from B to A?
10. Write the correct congruence statement for the triangles below.



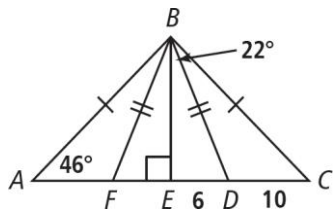
11. Find two possible integer values for three sides of a right triangle?
(e.g. 1, 2, 3 would be the type of answer, but incorrect.)

Items 12–14. Use the figure below.

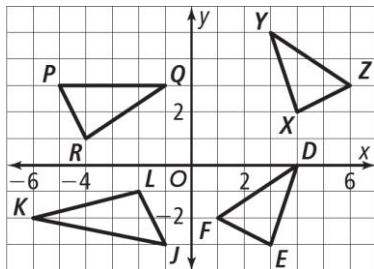


12. If $\overline{WX} \cong \overline{WZ}$, what theorem can be used to show that $\triangle PXW \cong \triangle PZW$?
13. If $\overline{XZ} \perp \overline{WY}$ and $\overline{XY} \cong \overline{ZY}$, what theorem can be used to show that $\triangle XYP \cong \triangle ZYP$?
14. If $\overline{XW} \parallel \overline{YZ}$ and $\angle XWZ \cong \angle ZYX$, what theorem can be used to show that $\triangle XWZ \cong \triangle ZYX$?

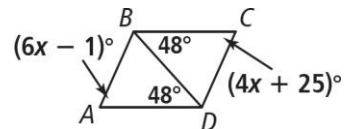
Items 15–16. Refer to the diagram shown.



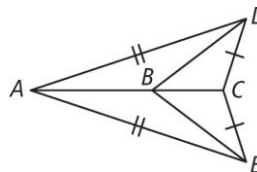
15. What is $m\angle EFB$?
16. What is AC ?
17. Which triangles is congruent to $\triangle XYZ$, if any?



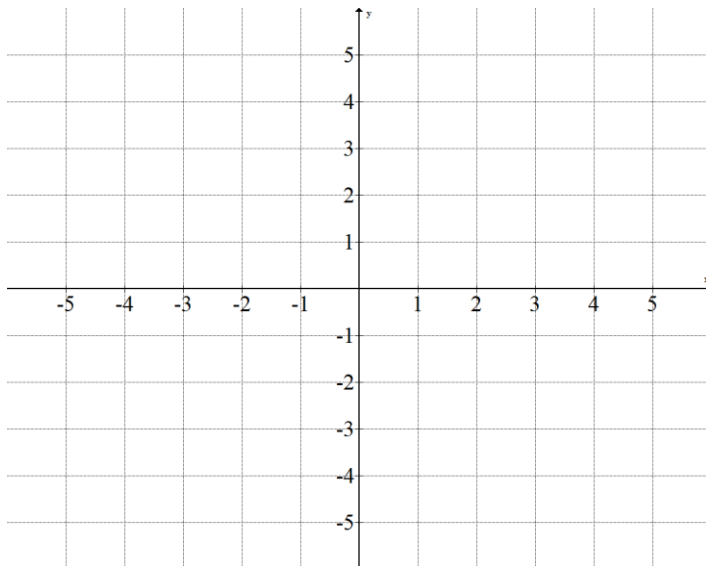
18. To show that $\triangle ADB \cong \triangle CBD$ by SAS, what must be the value of x ?



19. Which statements are true? Select all that apply.



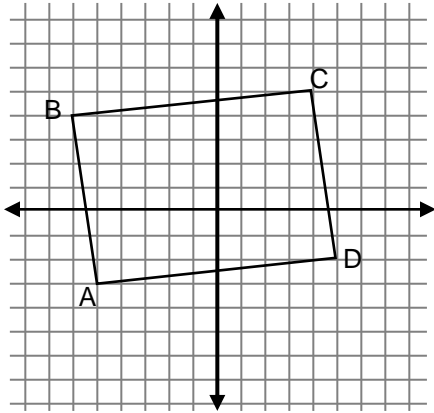
- A $\triangle ADB \cong \triangle AEB$
- B $\overline{BD} \cong \overline{BE}$
- C $\angle BDC \cong \angle BEC$
- D $\overline{AB} \cong \overline{BE}$



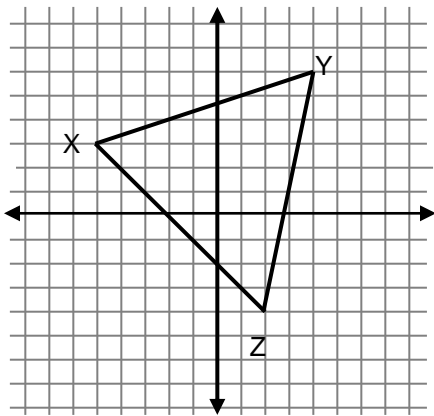
Given: $P(-2, 3)$ $Q(2, 4)$ $R(1, 0)$

20. Find point S that makes PQRS a parallelogram.
21. Find point S that makes PQSR a parallelogram.

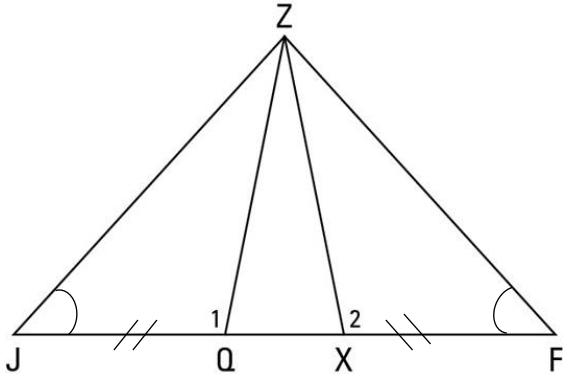
22. Find the area of the rectangle ABCD:



23. Find the perimeter of XYZ:

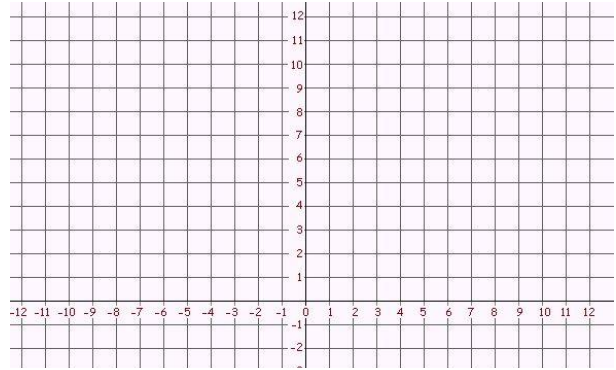


24. Is $\triangle JZX \cong \triangle FZQ$? Explain.



25. Prove or explain how you know that RECT is a rectangle.

R(-3, 5) E(-1, 8) C(5, 4) T(3, 1)



Proof practice:

For the odd-numbered exercises, see the Answers to Selected Exercises.

13. Given: $\overline{XZ} \cong \overline{YZ}$; $\overline{XW} \cong \overline{YW}$
 Prove: $\angle 7 \cong \angle 8$ (HINT: Draw $\triangle XUZ$ and $\triangle YWZ$ separately, as shown.)
 Plan: Since $\angle Z \cong \angle Z$, prove $\triangle XUZ \cong \triangle YWZ$ by the SAS Postulate. Then prove $\angle 7 \cong \angle 8$.

14. Given: $\overline{TR} \cong \overline{TW}$; $\overline{VR} \cong \overline{VW}$
 Prove: $\angle W \cong \angle R$
 Plan: Draw diagonal TV . Prove $\triangle TRV \cong \triangle TWV$.

15. Given: $\overline{XY} \cong \overline{XZ}$; $\overline{AY} \cong \overline{AZ}$
 Prove: $\angle Y \cong \angle Z$
 Plan: Draw diagonal XA . Prove $\triangle XAY \cong \triangle XAZ$.

16. Given: $\overline{AF} \cong \overline{DC}$; $\angle 1 \cong \angle 2$; $\overline{CB} \cong \overline{FE}$
 Prove: $\angle A \cong \angle D$

17. Given: $\overline{PA} \cong \overline{ST}$; $\angle 1 \cong \angle 2$; $\overline{TQ} \cong \overline{AR}$
 Prove: $\angle Q \cong \angle R$

Refer to the figure at the right for Exercises 18–19.

18. Given: $\overline{UJ} \cong \overline{ST}$; $\angle TJU \cong \angle JTS$
 Prove: $\angle U \cong \angle S$

19. Given: $\angle UJT \cong \angle STJ$; $\angle SJT \cong \angle UTJ$
 Prove: $\overline{UJ} \cong \overline{ST}$

Refer to $\triangle ATC$ for Exercises 20–22.

20. Given: $\overline{CA} \cong \overline{CT}$; $\angle 1 \cong \angle 2$
 Prove: $\angle 4 \cong \angle 5$

21. Given: $\angle A \cong \angle T$; $\overline{AO} \cong \overline{TO}$

26. Write an explicit formula for each sequence, then use the formula to find a_{15} .

27. 23, 35, 47, 59 ...

28. 5, 30, 180....

29. A luxury automobile was purchased for \$325,000. The car depreciates 15% a year. Write an equation to show the value of the car after t years, then use the equation to find the value after 12 years.