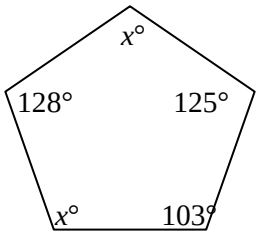
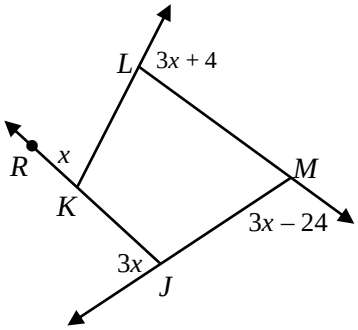
Geometry Fall Final Exam Review #2 Name:_____

1. What is the value of x in the figure below?

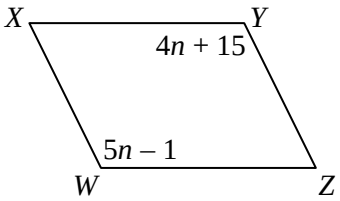


2. A figure is an equiangular 17-gon. What is the measure of each **exterior** angle of the polygon?

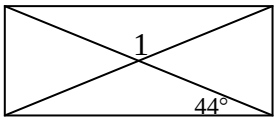
3. Find the measure of $\angle RKL$.



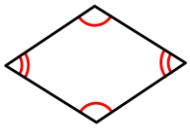
4. What is the measure of $\angle X$ in parallelogram $WXYZ$?



5. What is the measure of $\angle 1$ in the rectangle?



6. What is the best description for the quadrilateral below?



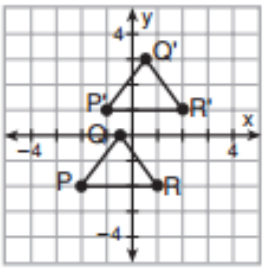
7. What is the measure of each interior ∠ of a regular hexagon? What is the measure of each exterior ∠?

8. Draw an angle bisector.

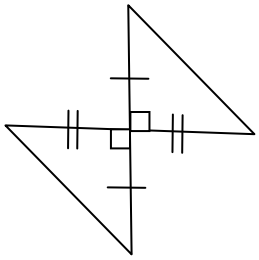
9. Reflect point Z(-1, -2) across the x-axis, then rotate 180. What is the final image?

10. Given $X(4, 2)$, $Y(1, 4)$, and X is the midpoint of $\overline{YR}$, what are the coordinates of R?

11. Name the vector or translation rule that will translate the pre-image to the image.

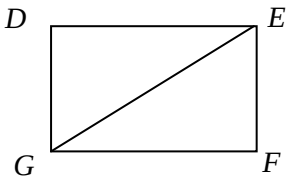


12. Which postulate or theorem will prove the two triangles are congruent?



13. An angle's measure is twice its supplement. What is the measure of the larger angle?

Complete the proof below.



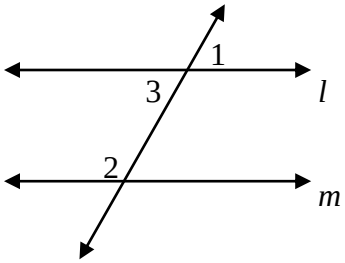
Given: $\overline{DE} \cong \overline{GF}$; $\overline{DG} \cong \overline{FE}$
Prove: $\Delta DEG \cong \Delta FGE$

Statements	Reasons
1.	1.
2.	2.
3.	3.
4.	4.

14. Suppose $\angle R$ and $\angle S$ are Complementary angles. The $m\angle R = 3y$ and the $m\angle S = 2(m\angle R)$. What is the value of y?

15. One endpoint of $\overline{DE}$ has coordinates (3,8). The other endpoint is (– 1,5). What are the coordinates of the midpoint?

16. Complete the proof.

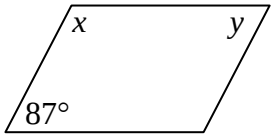


Given: $m\angle 1 + m\angle 2 = 180°$
Prove: $l \parallel m$

Statements	Reasons
1.	1.
2.	2.
3.	3.
4.	4.

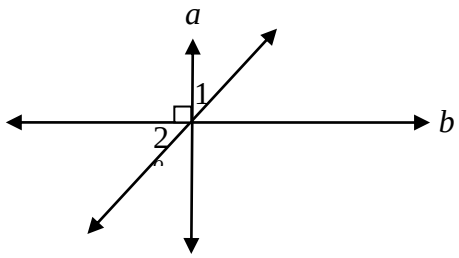
17. A piece of steel is 72 meters long is bent into the shape of a rectangle whose length is twice its width. Find the length of the rectangle.

18. Find x and y in the parallelogram below

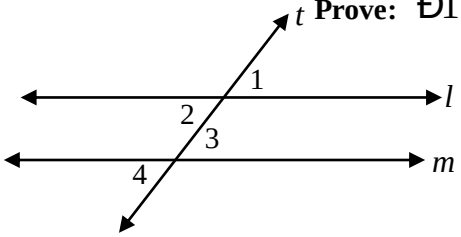


19. What are rules for reflecting about the line $y = x$, reflected over the x-axis and y-axis?

20. If $a \wedge b$ what *must* be true about $\angle 1$ and $\angle 2$?

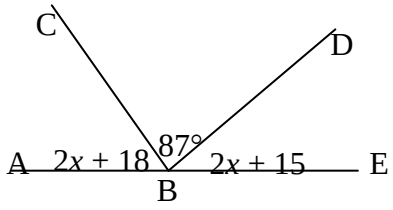


21. Given: $l \parallel m$ **Prove:** $\angle 1 \cong \angle 4$

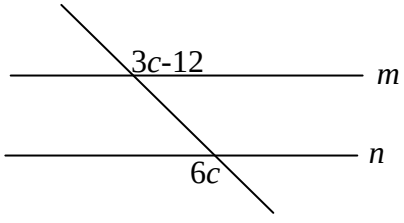


Statements	*Reasons*
1. $l \parallel m$	**1.**
2.	**2.**
3.	**3.**
4.	**4.**

22. Find $m\angle ABC$.

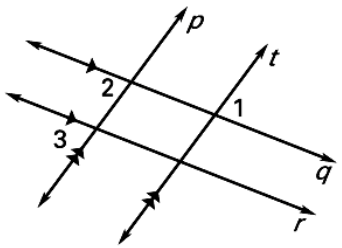


23. Find the value of c that makes $m \parallel n$?



GIVEN: $q \parallel r, p \parallel t$

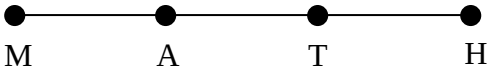
PROVE: $\angle 1 \cong \angle 3$



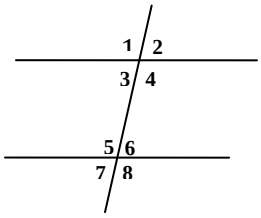
Statements	Reasons
$p \parallel t$	Given
	_____
$q \parallel r$	Given
	_____
$\angle 1 \cong \angle 3$	_____

Given: A is the midpoint of $\overline{MT}$;
T is the midpoint of $\overline{AH}$;

Prove: $\overline{MA} \cong \overline{TH}$



Statements	*Reasons*
1. A is the midpoint of $\overline{MT}$	1. Given
2. T is the midpoint of $\overline{AH}$	2. Given
3.	3.
4.	4.



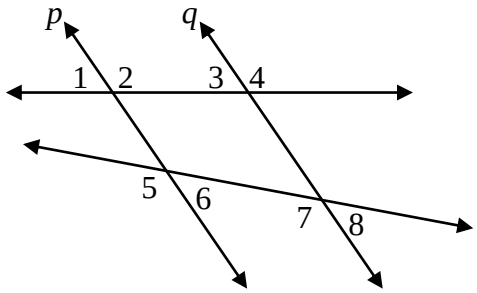
24. Name 2 corresponding ∠'s

25. Name 2 alternate interior ∠'s

26. Name 2 alternate exterior ∠'s

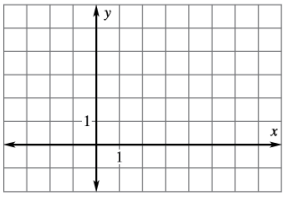
27. Name 2 same side interior ∠'s.

28. Given $p \parallel q$. Name 2 pairs of angles that *must* be congruent?



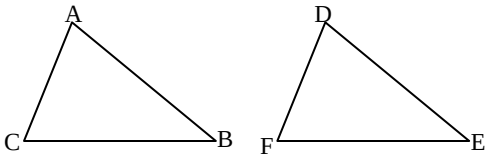
29. Find the distance between points P(3,5) and R(2,10).

30. A triangle has the given vertices. Classify the triangle by its sides:

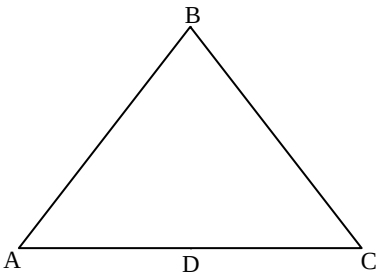


A(1,2) , B(2,5), C(3,2)

31. In the figure below, $\angle B \cong \angle E$ and $\angle A \cong \angle D$. What additional information do you need to know in order to prove that $\Delta ABC \cong \Delta DEF$ by ASA?

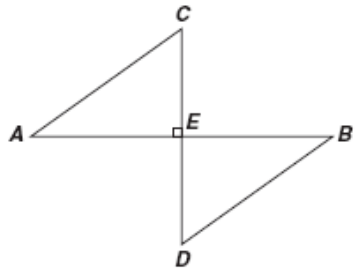


32. Given $\overline{BD}$ is the perpendicular bisector of $\overline{AC}$. Name all the congruent sides and angles.



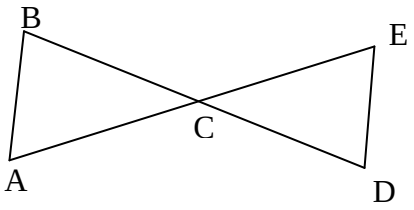
33. In the figure above, name 2 triangles that are congruent by SAS

34. Given E is a midpoint of $\overline{CD}$ and $\overline{AB}$; prove $\Delta ACE \cong \Delta BDE$?



35. Consider the translation (–3, –9) → (–4, –7). State the rule in vector or translation rule that describes this translation.

36. **Given:** C is the midpoint of $\overline{AE}$; $\overline{AB} \parallel \overline{DE}$
Prove: $\Delta ABC \cong \Delta EDC$



Statement	**Reason**
1.	**1.**
2.	**2.**
3.	**3.**
4.	**4.**
5.	**5.**

37. If two parallel lines are cut by a transversal, then the two pairs of same-side interior angles are _____?