Name_____ Date_____

Chapter 6 Review

Complete each statement.

1. The sum of the angle measures of an octagon is_____.

2. Each angle of a regular pentagon measures _____?

3. The length of a midsegment of a trapezoid is the _____ of the lengths of the bases.

4. The length of a midsegment between two sides of a triangle is _____ the length of the third side.

5. The sum of the measures of the angles of a heptagon is _____.

6. The measure of one angle in a regular decagon is _____.

7. The midsegment of a trapezoid is _____ to the two bases.

State whether each statement is always true, sometimes true, or never true.

8. A quadrilateral with two pairs of opposite sides congruent is a parallelogram.

9. A quadrilateral with one pair of opposite sides congruent and one pair parallel is a parallelogram.

10. A rectangle is a rhombus.

11. The midsegment of a trapezoid is longer than each base.

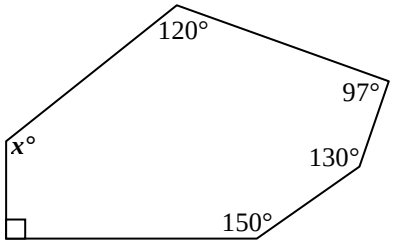
12. Base angles of a trapezoid are congruent.

13. Put a check in the box if the shape always has the given property.

Property	Parallelogram	Rectangle	Rhombus	Square	Kite	Trapezoid
All sides are $\cong$.						
Both pairs of opp. sides are $\cong$.						
Both pairs of opp. sides are $\parallel$.						
Exactly 1 pair of opp. sides $\parallel$.						
All angles are $\cong$.						
Exactly 1 pair of opp. angles $\cong$.						
Diagonals perpendicular.						
Diagonals are $\cong$.						
Diagonals bisect each other.						

14. How many sides does a regular polygon have if each exterior angle measures 30°?

15. Find the value of x.



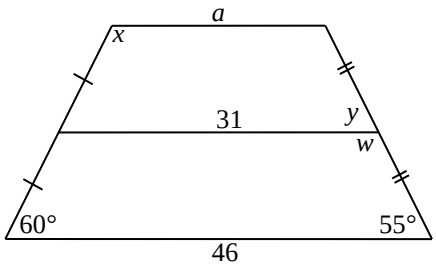
16. How many sides does a convex polygon have if the sum of all of its angles is 1980°?

17. The measures of the interior angles of a quadrilateral are $x°$, $2x°$, $3x°$, $4x°$. What is the measure of largest interior angle?

18. In the trapezoid, find the values of

a = _____ y = _____

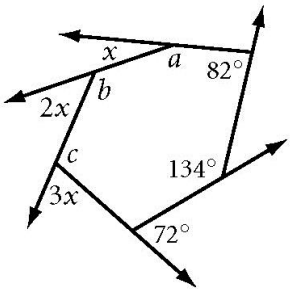
x = _____ w = _____



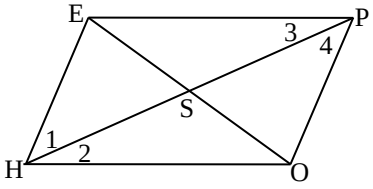
19. Find the missing values.

x = _____ a = _____

b = _____ c = _____



HOPE is a parallelogram. Find the lengths or angle measures.



20. If $m\angle 3 = 35°$ and $m\angle 4 = 40°$, then $m\angle 2 =$

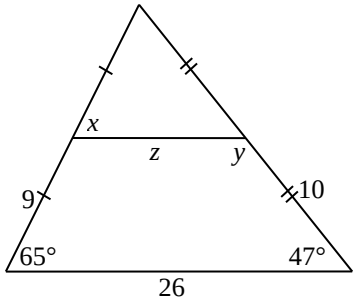
21. If $m\angle HEP = 108°$, then $m\angle EPO =$

22. If $HP = 8$, then $SP =$

23. Find the values of

x = _____ y = _____

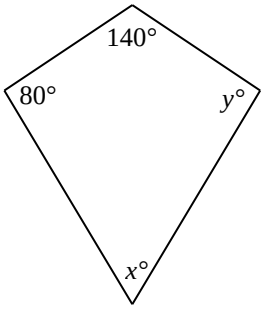
z = _____



---

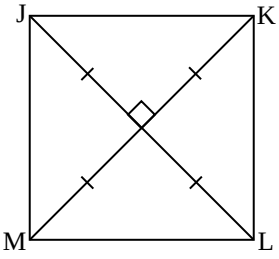
24. If the figure below is a kite as shown, find the missing values.

x = _____ y = _____



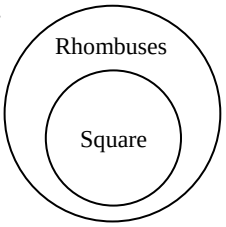
---

25. Is enough information given in the diagram to show that the quadrilateral *JKLM* is a square? Explain your reasoning.

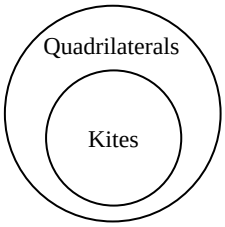


26. Which Venn diagram is NOT correct?

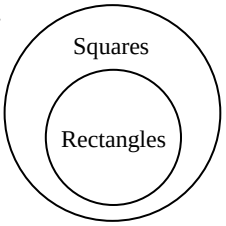
a.



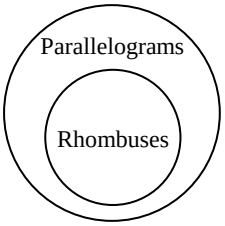
b.



c.



d.



---

27. Name the facts that you know about all parallelograms

a.

b.

c.

d.

e.

---

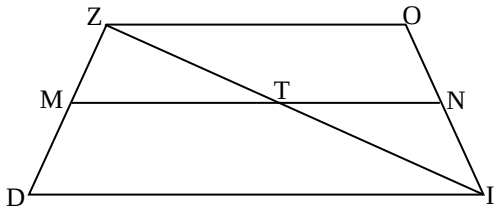
28. Rhombus diagonals have the following properties which may or may not be true for all parallelograms

a.

b.

Use the following diagram for problems #29-31.

$\overline{MN}$ is the midsegment of trapezoid ZOID.

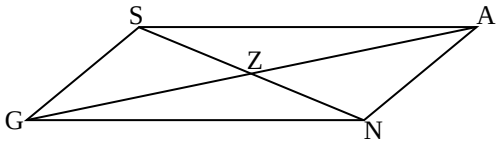


29. If ZO=8 and MN=11, then DI=_____.

30. If ZO=8, then TN=_____.

31. If trapezoid ZOID is isosceles and $m\angle D = 80°$, then $m\angle O =$ _____.

In problems #32-35, you could prove that quadrilateral SANG is a parallelogram if one more fact, in addition to those stated, were given. State the fact.



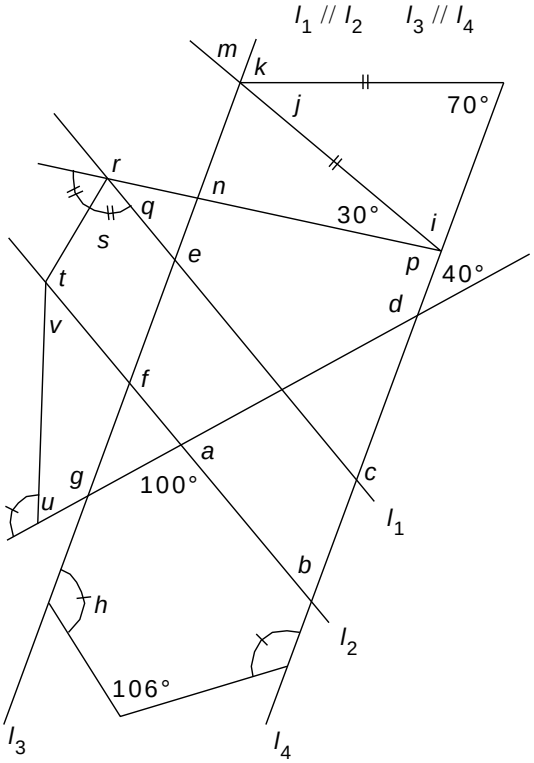
32. $GN = 9;\ NA = 5;\ SA = 9$

33. $\angle ASG \cong \angle GNA$

34. $\overline{SZ} \cong \overline{NZ}$

35. $\overline{SA} \| \overline{GN};\ SA = 17$

36. Find the missing angles.



a = _____ k = _____

b = _____ m= _____

c = _____ n= _____

d = _____ p= _____

e = _____ q= _____

f = _____ r = _____

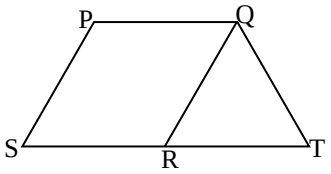
g = _____ s = _____

h = _____ t = _____

i = _____ u = _____

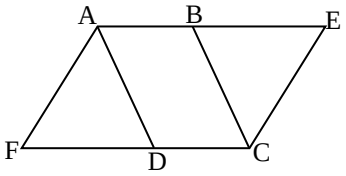
j = _____ v = _____

37) Given: Parallelogram PQRS
$\overline{QR} \cong \overline{QT}$
Prove: $\angle S \cong \angle T$



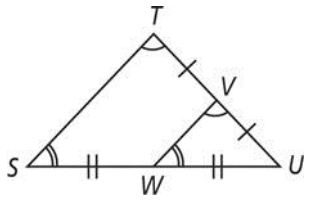
Statement	Reasons

38) Given: Parallelogram AECF
$\overline{FD} \cong \overline{BE}$
Prove: $\overline{AD} \cong \overline{BC}$



Statement	Reasons

39) Given: $\angle TSW \cong \angle VWU$
$\angle STV \cong \angle WVU$



Prove: $\overline{TS} \parallel \overline{VW}$

Assume temporarily that _____.

Then by the Converse of the _____, $\angle TSW$ and $\angle VWU$ cannot be _____ .

This contradicts the given information that _____.

Therefore, $\overline{TS} \parallel \overline{VW}$.

40) By making an indirect proof, show that a quadrilateral cannot have all obtuse angles.