9.1/9.2 Parallelograms

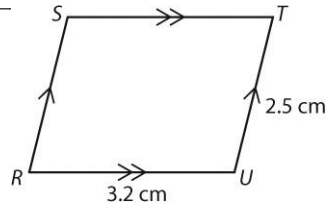
Fill in the blanks with words from the Word Bank to complete each definition or theorem.

1. If a quadrilateral is a parallelogram, then its consecutive angles are _____.
2. If a quadrilateral is a parallelogram, then its opposite sides are _____.
3. If a quadrilateral is a parallelogram, then its diagonals _____ each other.
4. If a quadrilateral is a parallelogram, then its opposite angles are _____.

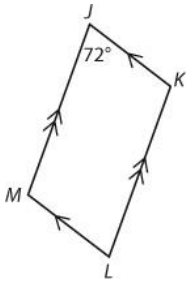
Word Bank
bisect
congruent
parallel
supplementary

Find each measure.

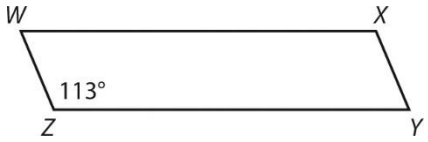
5. *RS* _____



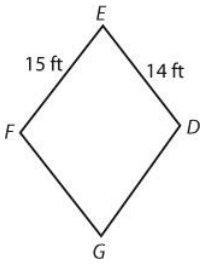
6. m∠*K* _____

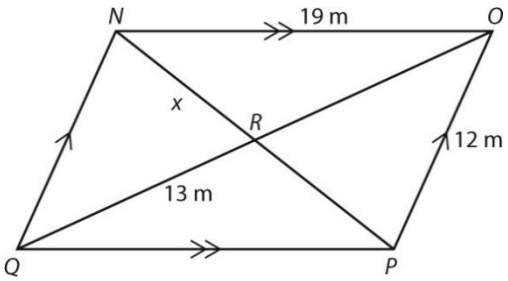


7. Angle *Y* of parallelogram *WXYZ* _____



8. Side *GD* of parallelogram *DEFG* _____



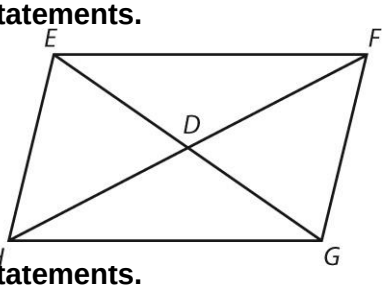


9. *QP* _____ 10. *NQ* _____

11. *OR* _____ 12. *QO* _____

13. *NP* _____

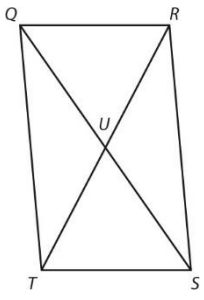
In the figure, *EFGH* is a parallelogram. Complete the following statements.



14. ∠*HEF* ≅ _____. 15. $\overline{ED}$ ≅ _____.

16. $\overline{HG}$ ≅ _____. 17. $\overline{HF}$ bisects _____.

In the figure, *QRST* is a parallelogram. Complete the following statements.



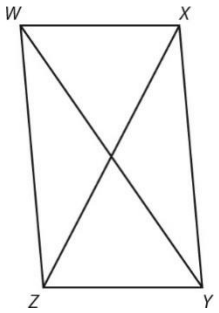
18. *QR* = 16, *TS* = _____

19. m∠*QTS* = 95°, m∠*SRQ* = _____

20. *QU* = 4, *SU* = _____

21. *TR* = 20, *TU* = _____

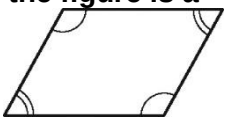
Fill in the missing information that would prove that *WXYZ* is a parallelogram.



22. $\angle WZY \cong$ _____ and $\angle ZWX \cong$ _____ 23. $\overline{WX} \cong$ _____ and $\overline{WZ} \cong$ _____

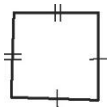
24. $\overline{WY}$ and $\overline{XZ}$ _____

In the figures below, interpret the symbols and conclude if the figure is a parallelogram. Write *parallelogram* or *not a parallelogram.*



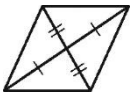
25. _____

Why or why not? _____



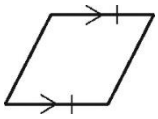
26. _____

Why or why not? _____



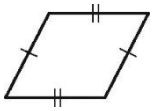
27. _____

Why or why not? _____



28. _____

Why or why not? _____

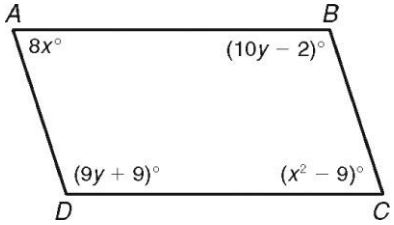


29. _____

Why or why not? _____

Is the figure a parallelogram given the values of the variables? Explain your answers. Show work.

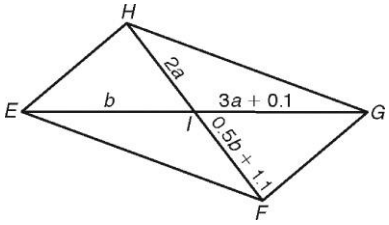
30. $x = 9$ and $y = 11$



_____

_____

31. $a = 4.3$ and $b = 13$



_____

_____