6.2 Exercises

Guided Practice

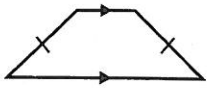
Vocabulary Check

1. Complete the statement: A(n) ___?___ is a quadrilateral with both pairs of opposite sides parallel.

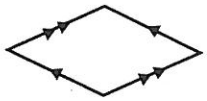
Skill Check

Decide whether the figure is a parallelogram. If it is not, explain why.

2.



3.



Complete the statement. Give a reason for your answer.

4. $\overline{JK} \cong$ ___?___

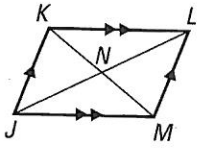
5. $\angle MLK \cong$ ___?___

6. $\angle JKL \cong$ ___?___

7. $\overline{JN} \cong$ ___?___

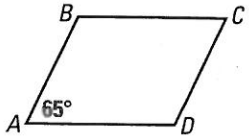
8. $\angle MNL \cong$ ___?___

9. $\overline{NM} \cong$ ___?___

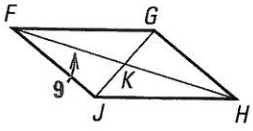


Find the measure in the parallelogram.

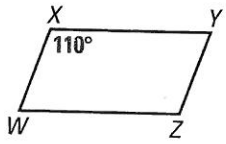
10. Find $m\angle C$.



11. Find HK.



12. Find $m\angle Y$.



Practice and Applications

Extra Practice

See p. 685.

Congruent Segments **Match the segment in $\square PQRS$ with a congruent one. Give a reason for your answer.**

13. $\overline{PT}$

14. $\overline{QR}$

15. $\overline{QT}$

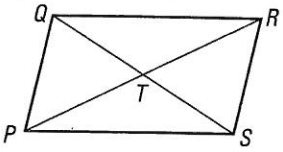
16. $\overline{PQ}$

A. $\overline{RS}$

B. $\overline{RT}$

C. $\overline{PS}$

D. $\overline{ST}$



Homework Help

Example 1: Exs. 13–16, 22–24
Example 2: Exs. 17–20, 25–27
Example 3: Exs. 13–16, 28–30

Congruent Angles **Match the angle in $\square VWXY$ with a congruent one. Give a reason for your answer.**

17. $\angle VZY$

18. $\angle WVY$

19. $\angle WXZ$

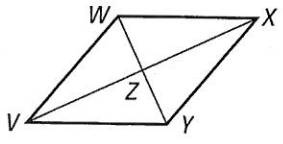
20. $\angle VYX$

E. $\angle WZX$

F. $\angle VWX$

G. $\angle YVZ$

H. $\angle YXW$



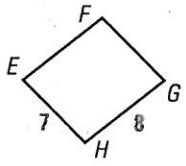
Student Help

VISUAL STRATEGY
In Ex. 21, use lined paper to help you sketch a parallelogram, as shown on on p. 302.

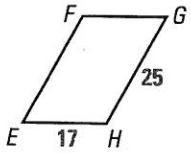
21. You be the Judge $EFGH$ is a parallelogram. Is $\overline{EF}$ parallel to $\overline{HG}$ or $\overline{GF}$? Explain your answer.

Finding Side Lengths ***EFGH*** **is a parallelogram. Find *EF* and *FG*.**

22.



23.



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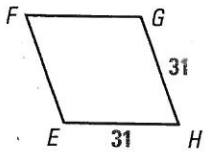
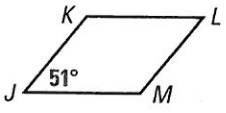


Finding Angle Measures ***JKLM*** **is a parallelogram. Find the missing angle measures.**

25.



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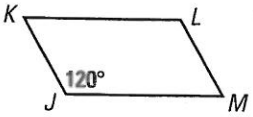
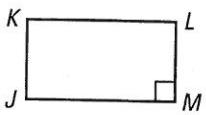
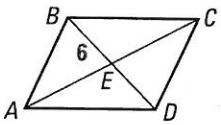


27.



Finding Segment Lengths ***ABCD*** **is a parallelogram. Find *DE*.**

28.



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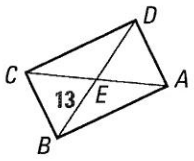
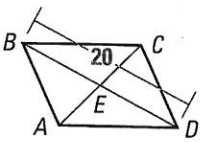


30.

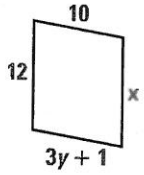


Link to Photography

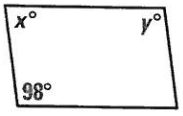
SCISSORS LIFT
Photographers can use scissors lifts for overhead shots. The crossing beams of the lift form parallelograms that raise and lower the platform. For more about scissors lifts, see p. 300.

Using Algebra **Find the values of *x* and *y* in the parallelogram.**

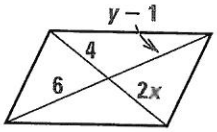
31.



32.



33.



Scissors Lift **Use the diagram of the scissors lift below.**

34. What is $m\angle B$ when $m\angle A$ is 120°?

35. Suppose you decrease $m\angle A$. What happens to $m\angle B$?

36. Suppose you decrease $m\angle A$. What happens to AD?

37. Suppose you decrease $m\angle A$. What happens to the overall height of the scissors lift?