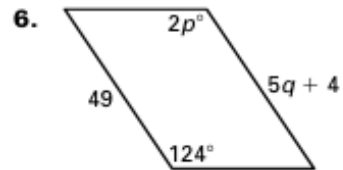
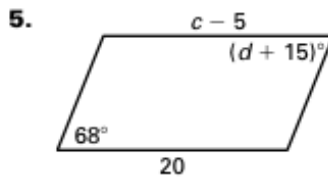
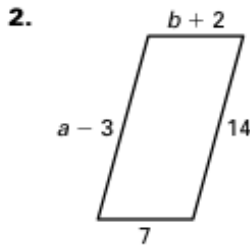
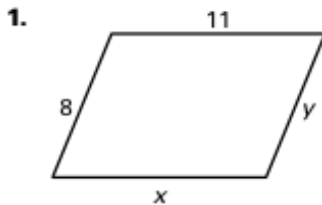


# Geometry

## Worksheet 8.2

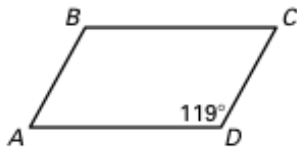
Name \_\_\_\_\_

Find the value of each variable in the parallelogram.

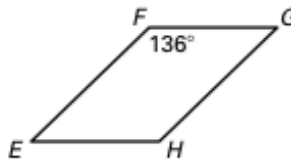


Find the measure of the indicated angle in the parallelogram.

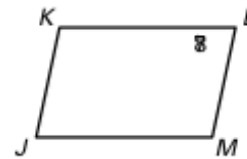
7. Find  $m\angle C$ .



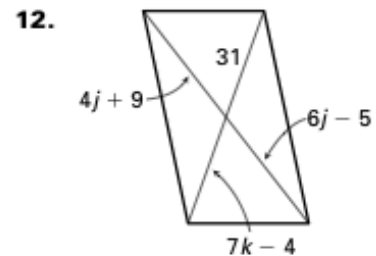
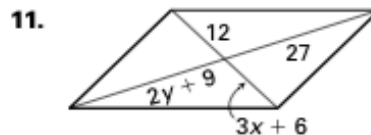
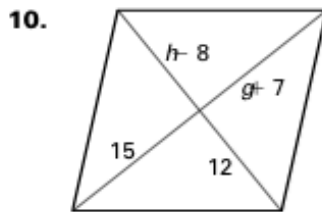
8. Find  $m\angle E$ .



9. Find  $m\angle K$ .

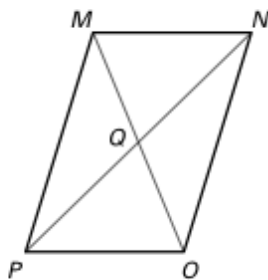


Find the value of each variable in the parallelogram.



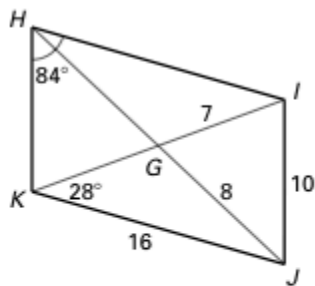
Use the diagram of parallelogram  $MNOP$  at the right to copy and complete the statement. *Explain.*

- |                                    |  |
|------------------------------------|--|
| 13. $\overline{MN} \cong$ <u>?</u> | 14. $\overline{MN} \parallel$ <u>?</u> |
| 15. $\overline{ON} \cong$ <u>?</u> | 16. $\angle MPO \cong$ <u>?</u>        |
| 17. $\overline{PQ} \cong$ <u>?</u> | 18. $\overline{QM} \cong$ <u>?</u>     |
| 19. $\angle MQN \cong$ <u>?</u>    | 20. $\angle NPO \cong$ <u>?</u>        |



Find the indicated measure in  $\square HIJK$ . *Explain.*

- |                   |                   |
|-------------------|-------------------|
| 21. $HI$          | 22. $KH$          |
| 23. $GH$          | 24. $HJ$          |
| 25. $m\angle KIH$ | 26. $m\angle JIH$ |
| 27. $m\angle KJI$ | 28. $m\angle HKI$ |



29. The measure of one interior angle of a parallelogram is twice the measure of another angle. Find the measure of each angle.
30. The measure of one interior angle of a parallelogram is 30 degrees more than the measure of another angle. Find the measure of each angle.

The crossing slats of a gate form parallelograms that move together to make the gate wider. In Exercises 31–34, use the figure at the right.

31. What is  $m\angle A$  when  $m\angle B = 110^\circ$ ?
32. What is  $m\angle D$  when  $m\angle B = 130^\circ$ ?
33. What happens to  $m\angle A$  when  $m\angle B$  decreases?
34. What happens to  $AC$  when  $m\angle B$  increases?

