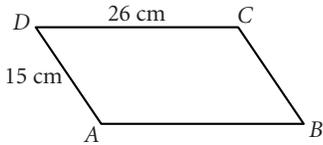


Lesson 5.5 • Properties of Parallelograms

Name _____ Period _____ Date _____

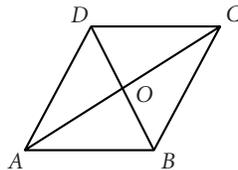
In Exercises 1–7, $ABCD$ is a parallelogram.

1. Perimeter $ABCD =$ _____



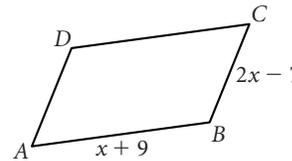
2. $AO = 11$, and $BO = 7$.

$AC =$ _____, $BD =$ _____

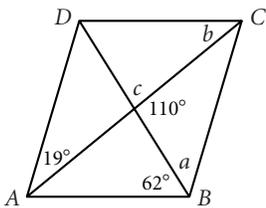


3. Perimeter $ABCD = 46$.

$AB =$ _____, $BC =$ _____

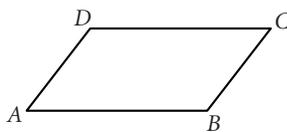


4. $a =$ _____, $b =$ _____,
 $c =$ _____

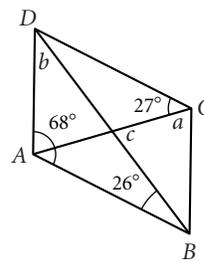


5. Perimeter $ABCD = 119$, and

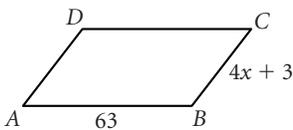
$BC = 24$. $AB =$ _____



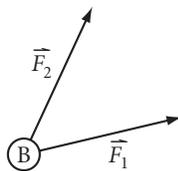
6. $a =$ _____, $b =$ _____,
 $c =$ _____



7. Perimeter $ABCD = 16x - 12$. $AD =$ _____

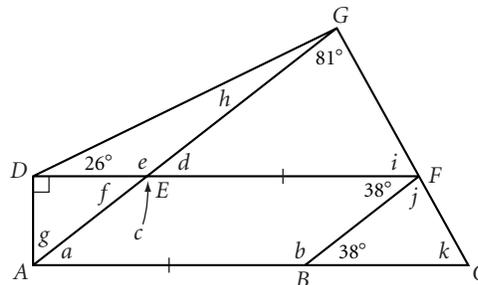


8. Ball B is struck at the same instant by two forces, \vec{F}_1 and \vec{F}_2 . Show the resultant force on the ball.



9. Find each lettered angle measure.

- $a =$ _____ $g =$ _____
 $b =$ _____ $h =$ _____
 $c =$ _____ $i =$ _____
 $d =$ _____ $j =$ _____
 $e =$ _____ $k =$ _____
 $f =$ _____



10. Construct a parallelogram with diagonals \overline{AC} and \overline{BD} .
Is your parallelogram unique? If not, construct a different (noncongruent) parallelogram.



Lesson 5.6 • Properties of Special Parallelograms

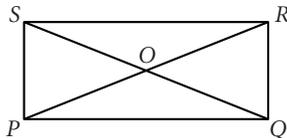
Name _____ Period _____ Date _____

1. $PQRS$ is a rectangle and $OS = 16$.

$OQ =$ _____

$m\angle QRS =$ _____

$PR =$ _____

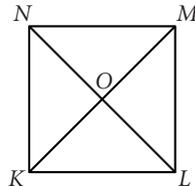


2. $KLMN$ is a square and $NM = 8$.

$m\angle OKL =$ _____

$m\angle MOL =$ _____

Perimeter $KLMN =$ _____

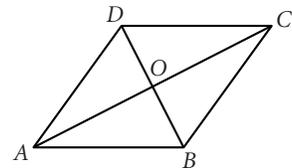


3. $ABCD$ is a rhombus, $AD = 11$, and $DO = 6$.

$OB =$ _____

$BC =$ _____

$m\angle AOD =$ _____

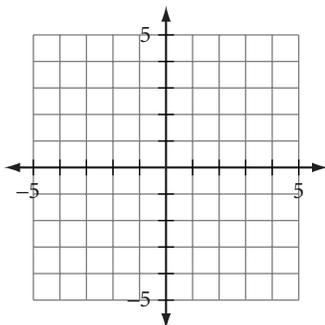


In Exercises 4–11, match each description with *all* the terms that fit it.

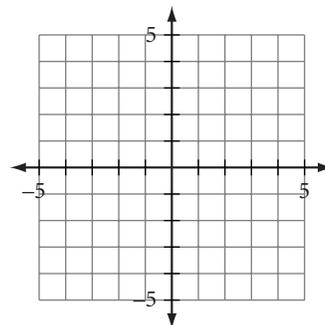
- | | | | |
|--------------|-----------------------|------------------|-----------------------|
| a. Trapezoid | b. Isosceles triangle | c. Parallelogram | d. Rhombus |
| e. Kite | f. Rectangle | g. Square | h. All quadrilaterals |
4. _____ Diagonals bisect each other.
 5. _____ Diagonals are perpendicular.
 6. _____ Diagonals are congruent.
 7. _____ Measures of interior angles sum to 360° .
 8. _____ Opposite sides are congruent.
 9. _____ Opposite angles are congruent.
 10. _____ Both diagonals bisect angles.
 11. _____ Diagonals are perpendicular bisectors of each other.

In Exercises 12 and 13, graph the points and determine whether $ABCD$ is a trapezoid, parallelogram, rectangle, or none of these.

12. $A(-4, -1), B(0, -3), C(4, 0), D(-1, 5)$



13. $A(0, -3), B(-1, 2), C(-3, 4), D(-2, -1)$



14. Construct rectangle $ABCD$ with diagonal \overline{AC} and $\angle CAB$.

