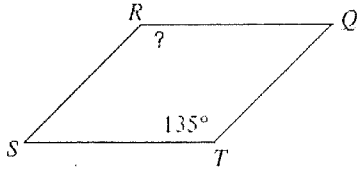


Name: _____

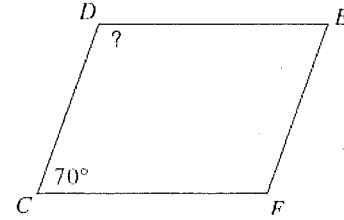
Homework #5-5: Parallelograms

Find the measurement indicated in each parallelogram.

1)

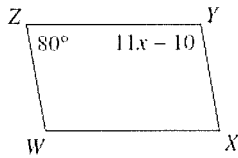


2)

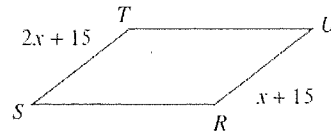


Solve for x . Each figure is a parallelogram.

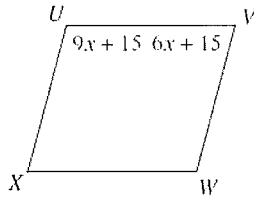
11)



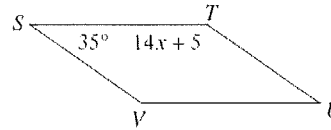
12)



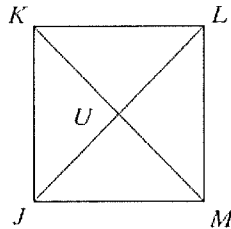
13)



14)

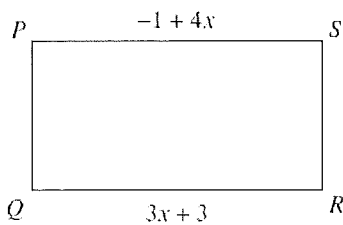


18) $KU = 3x + 3$
 $UM = 4x - 4$

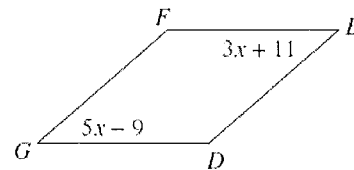


Find the measurement indicated in each parallelogram.

19) Find RQ



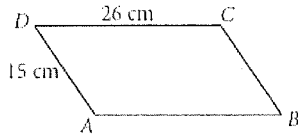
20) Find $m\angle G$



Name: _____

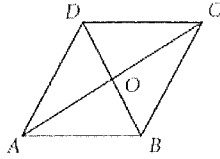
In Exercises 1–7, $ABCD$ is a parallelogram.

1. Perimeter $ABCD =$ _____



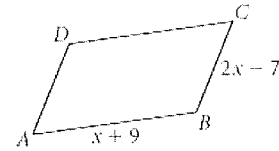
2. $AO = 11$, and $BO = 7$.

$AC =$ _____, $BD =$ _____

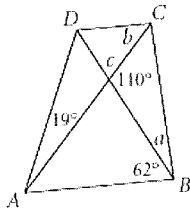


3. Perimeter $ABCD = 46$.

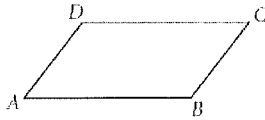
$AB =$ _____, $BC =$ _____



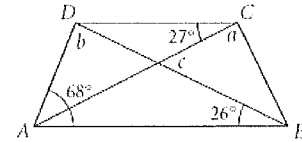
4. $a =$ _____, $b =$ _____,
 $c =$ _____



5. Perimeter $ABCD = 119$, and
 $BC = 24$. $AB =$ _____



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



Use your new conjectures in the following exercises. In Exercises 1-6, each figure is a parallelogram.

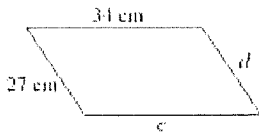


Construction tools
for Exercises 7 and 8



Geometry software
for Exercise 21 and 22

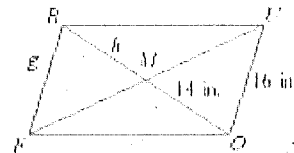
1. $c = ?$
 $d = ?$



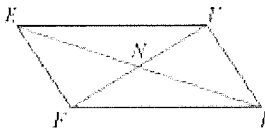
2. $a = ?$
 $b = ?$



3. $g = ?$
 $h = ?$



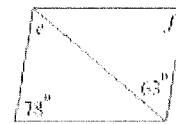
4. $VF = 36$ m
 $EF = 24$ m
 $EI = 42$ m
What is the perimeter
of $\triangle NVI$? (1)



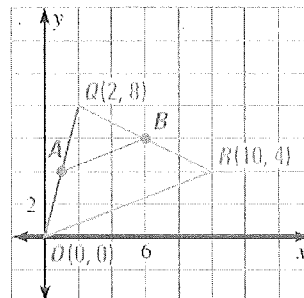
5. What is the perimeter?



6. $e = ?$
 $f = ?$

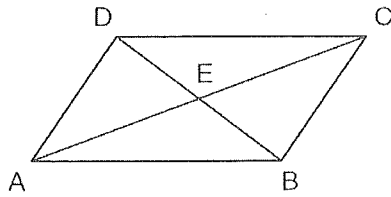


7. Prove the figure on the coordinate plane to the right is a trapezoid.



Name:

- 11 In the diagram below, parallelogram $ABCD$ has diagonals \overline{AC} and \overline{BD} that intersect at point E .



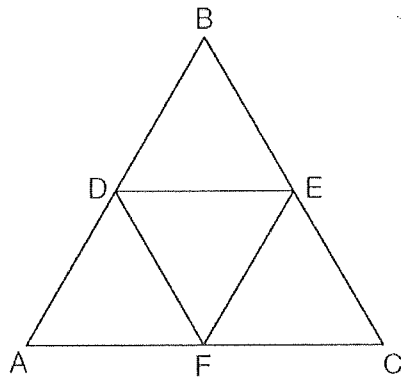
Which expression is *not* always true?

- (1) $\angle DAE \cong \angle BCE$ (3) $\overline{AC} \cong \overline{DB}$
(2) $\angle DEC \cong \angle BEA$ (4) $\overline{DE} \cong \overline{EB}$

- 4 Which statement is true about every parallelogram?

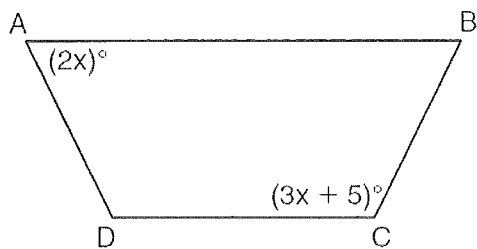
- (1) All four sides are congruent.
(2) The interior angles are all congruent.
(3) Two pairs of opposite sides are congruent.
(4) The diagonals are perpendicular to each other.

- 3 In the diagram below, the vertices of $\triangle DEF$ are the midpoints of the sides of equilateral triangle ABC , and the perimeter of $\triangle ABC$ is 36 cm.



What is the length, in centimeters, of \overline{EF} ?

The diagram below shows isosceles trapezoid $ABCD$ with $\overline{AB} \parallel \overline{DC}$ and $\overline{AD} \cong \overline{BC}$. If $m\angle BAD = 2x$ and $m\angle BCD = 3x + 5$, find $m\angle BAD$.



- 5 In the diagram below of quadrilateral $ABCD$ with diagonal \overline{BD} , $m\angle A = 93$, $m\angle ADB = 43$, $m\angle C = 3x + 5$, $m\angle BDC = x + 19$, and $m\angle DBC = 2x + 6$. Determine if \overline{AB} is parallel to \overline{DC} . Explain your reasoning.

