Quadrilateral Properties Review

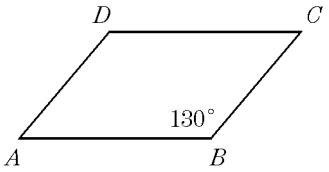
Name: _____ **Date:** _____

1. In which quadrilateral are the diagonals always congruent?

   A. rectangle B. trapezoid

   C. rhombus D. parallelogram

2. In parallelogram $ABCD$, the measure of $\angle ABC$ is 130°. Find the measure, in degrees, of $\angle DAB$.



3. If the diagonals of a parallelogram are perpendicular but *not* congruent, then the parallelogram is

   A. a rectangle

   B. a rhombus

   C. a square

   D. an isosceles trapezoid

4. Which quadrilateral must have congruent diagonals?

   A. trapezoid B. rectangle

   C. rhombus D. parallelogram

5. All of the following figures must have congruent diagonals *except*

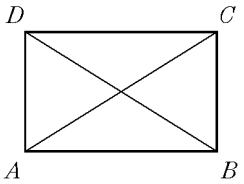
   A. a rectangle

   B. a square

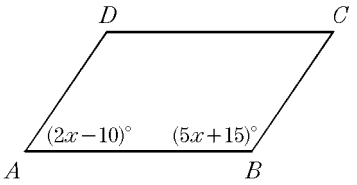
   C. an isosceles trapezoid

   D. a parallelogram

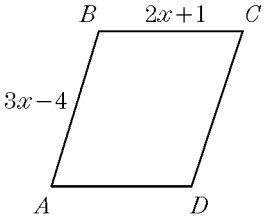
6. In rectangle $ABCD$, diagonal $AC = x + 10$ and diagonal $BD = 2x - 30$. Find the value of x.



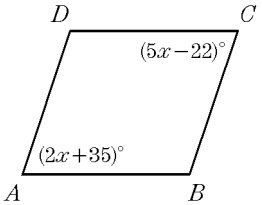
7. In the accompanying diagram of parallelogram $ABCD$, $m\angle A = 2x - 10$ and $m\angle B = 5x + 15$. Find x.



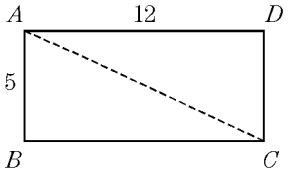
8. In the accompanying diagram of rhombus $ABCD$, the lengths of the sides $\overline{AB}$ and $\overline{BC}$ are represented by $3x - 4$ and $2x + 1$, respectively. Find the value of x.



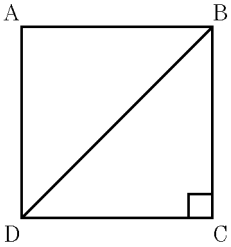
9. In the accompanying figure, $ABCD$ is a parallelogram, $m\angle A = 2x + 35$, and $m\angle C = 5x - 22$. Find the value of x.



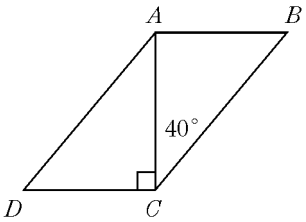
10. In the accompanying diagram of rectangle $ABCD$, $AD = 12$ and $AB = 5$. What is the length of diagonal $\overline{AC}$?



11. In the accompanying diagram, $ABCD$ is a rectangle. If $DB = 10$ and $DC = 8$, find BC.



12. In parallelogram $ABCD$, diagonal $\overline{AC} \perp \overline{CD}$. If $m\angle ACB = 40$, find $m\angle ADC$.



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Quadrilateral Properties Review 11/03/2016

1.
Answer: A

2.
Answer: 50

3.
Answer: B

4.
Answer: B

5.
Answer: D

6.
Answer: 40

7.
Answer: 25

8.
Answer: 5

9.
Answer: 19

10.
Answer: 13

11.
Answer: 6

12.
Answer: 50