## Some Quad Problems

Name: $\qquad$

1. In parallelogram $A B C D$, the measure of $\angle A B C$ is $130^{\circ}$. Find the measure, in degrees, of $\angle D A B$.

2. In which quadrilateral are the diagonals always congruent?
A. rectangle
B. trapezoid
C. rhombus
D. parallelogram
3. In quadrilateral $A B C D, m \angle A=72, m \angle B=94$, and $m \angle C=113$. What is $m \angle D$ ?
A. 81
B. 86
C. 108
D. 136

Date: $\qquad$
4. All of the following figures must have congruent diagonals except
A. a rectangle
B. a square
C. an isosceles trapezoid
D. a parallelogram
5. In parallelogram $A B C D$, diagonal $\overline{A C} \perp \overline{C D}$. If $m \angle A C B=40$, find $m \angle A D C$.

6. The measures of two consecutive angles of a parallelogram are in the ratio 3:7. Find the measure of an acute angle of the parallelogram.
7. Which polygon must have congruent diagonals?
A. rhombus
B. square
C. parallelogram
D. trapezoid
8. In the diagram of trapezoid $A B C D$ below, diagonals $\overline{A C}$ and $\overline{B D}$ intersect at $E$ and $\triangle A B C \cong \triangle D C B$.


Which statement is true based on the given information?
A. $\overline{A C} \cong \overline{B C}$
B. $\overline{C D} \cong \overline{A D}$
C. $\angle C D E \cong \angle B A D$
D. $\angle C D B \cong \angle B A C$
9. Which reason could be used to prove that a parallelogram is a rhombus?
A. Diagonals are congruent.
B. Opposite sides are parallel.
C. Diagonals are perpendicular.
D. Opposite angles are congruent.
10. If the length of each side of a square is represented by $4 x+1$, which expression represents the perimeter?
A. $16 x+4$
B. $8 x+2$
C. $16 x^{2}+1$
D. $16 x^{2}+8 x+1$

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| 1. |  |
| :--- | :--- |
| Answer: |  |
| Points: | 1 |
| 2. | 1 |
| Answer: | A |
| Points: | 1 |
| 3. |  |
| Answer: | A |
| Points: | 1 |
| 4. |  |
| Answer: | D |
| Points: | 1 |
| 5. |  |
| Answer: | 50 |
| Points: | 1 |
| 6. |  |
| Answer: | $54^{\circ}$ |
| Points: | 1 |
| 7. |  |
| Answer: | B |
| Points: | 1 |
| 8. |  |
| Answer: | D |
| Points: | 1 |
| 9. |  |
| Answer: | C |
| Points: | 1 |
| 10. |  |
| Answer: | A |
| Points: | 1 |

