Answer Key · Lesson 6.4: Rectangles, Rhombuses and Squares

School Launch · Geometry · Unit 6 · Worksheet A · for the parent

Key

1. 8; 4

Diagonal $\overline{AC}$ of rectangle $ABCD$ is 8 cm. Find BD and the distance from the intersection point to A.

2. 26; 13

Diagonal $\overline{AC}$ of rectangle $ABCD$ is 26 cm. Find BD and the distance from the intersection point to A.

3. 20; 10

Diagonal $\overline{AC}$ of rectangle $ABCD$ is 20 cm. Find BD and the distance from the intersection point to A.

4. $110°$; $70°$; $90°$

1. The diagonal bisects $\angle A$: $m\angle BAD = 2(55) = 110°$
2. Consecutive angles are supplementary: $180 - 110 = 70°$
3. Rhombus diagonals are perpendicular: $90°$

In rhombus $ABCD$, $m\angle BAC = 55°$ (diagonal $\overline{AC}$). Find $m\angle BAD$, $m\angle ABC$, and the angle between the diagonals.

5. $98°$; $82°$; $90°$

1. The diagonal bisects $\angle A$: $m\angle BAD = 2(49) = 98°$
2. Consecutive angles are supplementary: $180 - 98 = 82°$
3. Rhombus diagonals are perpendicular: $90°$

In rhombus $ABCD$, $m\angle BAC = 49°$ (diagonal $\overline{AC}$). Find $m\angle BAD$, $m\angle ABC$, and the angle between the diagonals.

6. $128°$; $52°$; $90°$

1. The diagonal bisects $\angle A$: $m\angle BAD = 2(64) = 128°$
2. Consecutive angles are supplementary: $180 - 128 = 52°$
3. Rhombus diagonals are perpendicular: $90°$

In rhombus $ABCD$, $m\angle BAC = 64°$ (diagonal $\overline{AC}$). Find $m\angle BAD$, $m\angle ABC$, and the angle between the diagonals.

7. $68°$; $112°$; $90°$

1. The diagonal bisects $\angle A$: $m\angle BAD = 2(34) = 68°$
2. Consecutive angles are supplementary: $180 - 68 = 112°$
3. Rhombus diagonals are perpendicular: $90°$

In rhombus $ABCD$, $m\angle BAC = 34°$ (diagonal $\overline{AC}$). Find $m\angle BAD$, $m\angle ABC$, and the angle between the diagonals.

8. $60°$; $120°$; $90°$

1. The diagonal bisects $\angle A$: $m\angle BAD = 2(30) = 60°$
2. Consecutive angles are supplementary: $180 - 60 = 120°$
3. Rhombus diagonals are perpendicular: $90°$

In rhombus $ABCD$, $m\angle BAC = 30°$ (diagonal $\overline{AC}$). Find $m\angle BAD$, $m\angle ABC$, and the angle between the diagonals.

9. $80°$; $100°$; $90°$

1. The diagonal bisects $\angle A$: $m\angle BAD = 2(40) = 80°$
2. Consecutive angles are supplementary: $180 - 80 = 100°$
3. Rhombus diagonals are perpendicular: $90°$

In rhombus $ABCD$, $m\angle BAC = 40°$ (diagonal $\overline{AC}$). Find $m\angle BAD$, $m\angle ABC$, and the angle between the diagonals.

10. $140°$; $40°$; $90°$

1. The diagonal bisects $\angle A$: $m\angle BAD = 2(70) = 140°$
2. Consecutive angles are supplementary: $180 - 140°$
3. Rhombus diagonals are perpendicular: $90°$

In rhombus $ABCD$, $m\angle BAC = 70°$ (diagonal $\overline{AC}$). Find $m\angle BAD$, $m\angle ABC$, and the angle between the diagonals.