Answer Key · Lesson 6.2: Properties of Parallelograms

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

Key

1. $102^\circ, 78^\circ, 102^\circ$

In parallelogram $ABCD$, $m\angle A = 78^\circ$. Find $m\angle B$, $m\angle C$ and $m\angle D$.

2. $69^\circ, 111^\circ, 69^\circ$

In parallelogram $ABCD$, $m\angle A = 111^\circ$. Find $m\angle B$, $m\angle C$ and $m\angle D$.

3. $81^\circ, 99^\circ, 81^\circ$

In parallelogram $ABCD$, $m\angle A = 99^\circ$. Find $m\angle B$, $m\angle C$ and $m\angle D$.

4. $x = 14$; 48

1. Set them equal: $3x + 6 = 2x + 20$
2. $x = 14$, so $x = 14$
3. Substitute: $3(14) + 6 = 48$

In parallelogram $ABCD$, opposite sides measure $3x + 6$ and $2x + 20$. Find x and the length.

5. $x = 6$; 11

1. Set them equal: $2x - 1 = x + 5$
2. $x = 6$, so $x = 6$
3. Substitute: $2(6) - 1 = 11$

In parallelogram $ABCD$, opposite sides measure $2x - 1$ and $x + 5$. Find x and the length.

6. $x = 11$; 12

1. Set them equal: $2x - 10 = 4x - 32$
2. $-2x = -22$, so $x = 11$
3. Substitute: $2(11) - 10 = 12$

In parallelogram $ABCD$, the two halves of one diagonal measure $2x - 10$ and $4x - 32$. Find x and the length.

7. $x = 9$; 10

1. Set them equal: $2x - 8 = 4x - 26$
2. $-2x = -18$, so $x = 9$
3. Substitute: $2(9) - 8 = 10$

In parallelogram $ABCD$, the two halves of one diagonal measure $2x - 8$ and $4x - 26$. Find x and the length.

8. $x = 15$; 86

1. Set them equal: $6x - 4 = 5x + 11$
2. $x = 15$, so $x = 15$
3. Substitute: $6(15) - 4 = 86$

In parallelogram $ABCD$, opposite sides measure $6x - 4$ and $5x + 11$. Find x and the length.

9. $x = 3$; 12

1. Set them equal: $5x - 3 = 6x - 6$
2. $-x = -3$, so $x = 3$
3. Substitute: $5(3) - 3 = 12$

In parallelogram $ABCD$, opposite sides measure $5x - 3$ and $6x - 6$. Find x and the length.

10. $x = 10$; 60

1. Set them equal: $5x + 10 = 2x + 40$
2. $3x = 30$, so $x = 10$
3. Substitute: $5(10) + 10 = 60$

In parallelogram $ABCD$, the two halves of one diagonal measure $5x + 10$ and $2x + 40$. Find x and the length.