NAME:_____

1. Find the measure, to the nearest tenth, of the diagonal of a rectangle with dimensions 16 cm by 13 cm.

   [A] 20.6 cm [B] 19.5 cm

   [C] 9.3 cm [D] 5.4 cm

2. Find the measure, to the nearest tenth, of the diagonal of a rectangle with dimensions 18 cm by 9 cm.

   [A] 5.2 cm [B] 20.1 cm

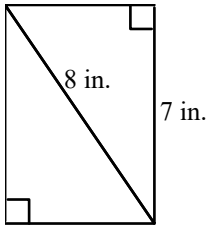
   [C] 15.6 cm [D] 19 cm

3. Find the measure, to the nearest tenth, of the diagonal of a rectangle with dimensions 19 cm by 7 cm.

   [A] 5.1 cm [B] 20.2 cm

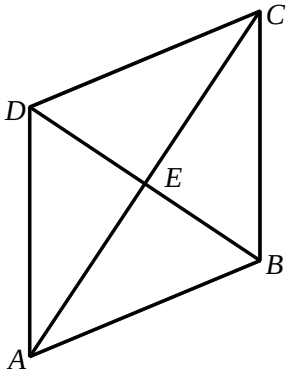
   [C] 17.7 cm [D] 21.3 cm

4. Use any problem solving strategy to solve the following problem. Find the width of the box below. Write your answer in simplest radical form and as a decimal rounded to the nearest tenth.



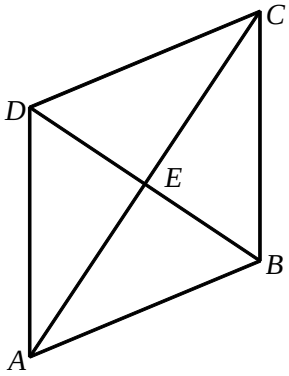
5. Use any problem solving strategy to solve the following problem. The dimensions of a rectangle are 4 and 9. What is the sum of the lengths of the diagonals of the rectangle? Write your answer in simplest radical form.

6. Given $ABCD$ is a rhombus, $m\angle ABC = 120$, and $EB = 19$. Find the length of $\overline{AD}$.



   [A] 38 [B] 43 [C] 42 [D] 35

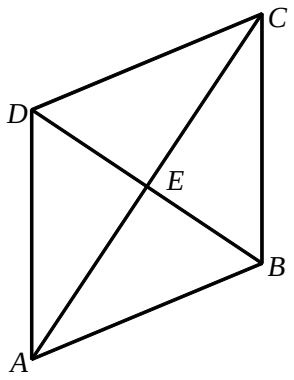
7. Given $ABCD$ is a rhombus, $m\angle BAC = 30$, and $AD = 24$. Find the length of $\overline{DE}$.



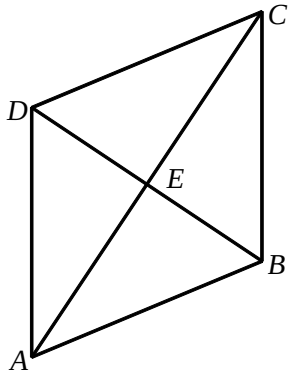
   [A] 9 [B] 12 [C] 17 [D] 16

NAME:_____

8. Given $ABCD$ is a rhombus, $m\angle BAC = 30$, and $AB = 24$. Find the length of $\overline{DE}$.



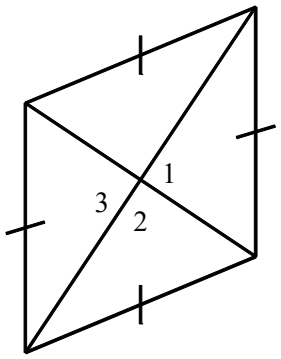
9. Given $ABCD$ is a rhombus, $m\angle DCB = 60$, and $EB = 18$. Find the length of $\overline{DC}$.



10. In rhombus $ABCD$, $AB = 8$ and $AC = 15$. Find BD to the nearest tenth.

[A] 5.6 [B] 25.4 [C] 7.9 [D] 21.9

11. Find the value of each variable in the parallelogram. $m\angle 1 = 2x$, $m\angle 2 = x + y$, and $m\angle 3 = 10z$.



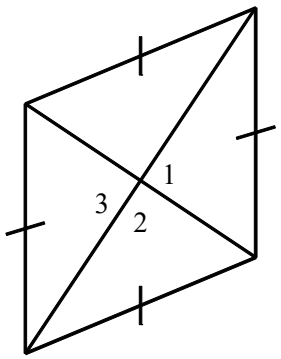
[A] $x = 45, y = 45, z = 9$

[B] $x = 45, y = 50, z = 4$

[C] $x = 90, y = 90, z = 18$

[D] $x = 90, y = 95, z = 13$

12. Find the value of each variable in the parallelogram. $m\angle 1 = 3x$, $m\angle 2 = x + y$, and $m\angle 3 = 5z$.



[A] $x = 30, y = 65, z = 13$

[B] $x = 60, y = 125, z = 31$

[C] $x = 30, y = 60, z = 18$

[D] $x = 60, y = 120, z = 36$

[1] A

[2] B

[3] B

[4] $\sqrt{15} \approx 3.9$ in.

[5] $2\sqrt{97}$

[6] A

[7] B

[8] 12

[9] 36

[10] A

[11] A

[12] C