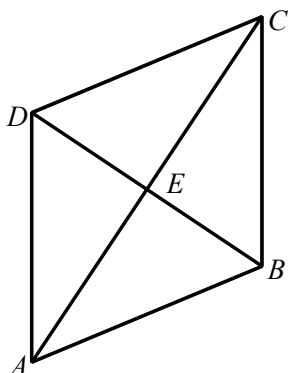


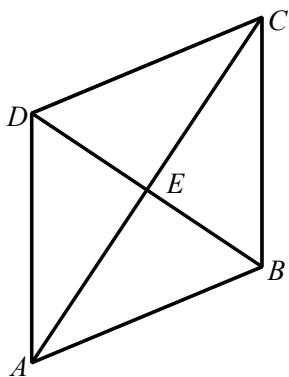
P.I. G.G.39: Investigate, justify, and apply theorems about special parallelograms (rhombuses) involving their angles, sides, and diagonals

1. 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

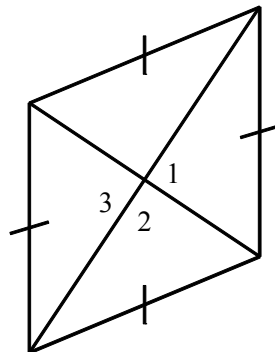
2. Given $ABCD$ is a rhombus, $m\angle DCB = 60$, and $EB = 18$. Find the length of \overline{DC} .



3. 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

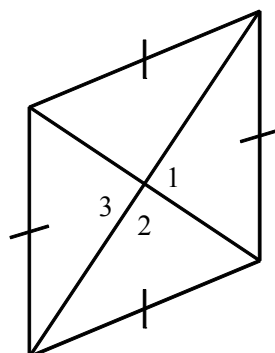
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4. Find the value of each variable in the parallelogram. $m\angle 1 = 2x$, $m\angle 2 = x + y$, and $m\angle 3 = 10z$.



- [A] $x = 45, y = 45, z = 9$
[B] $x = 45, y = 50, z = 4$
[C] $x = 90, y = 90, z = 18$
[D] $x = 90, y = 95, z = 13$

5. 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] B

[2] 36

[3] A

[4] A

[5] C