

pg. 136 #1-15

1. 133° ; $\angle 1$ and the given angle are supplementary.
2. 133° ; $\angle 8$ and $\angle 1$ are alternate exterior angles.
3. 133° ; $\angle 1$ and $\angle 4$ are vertical angles.
4. 133° ; $\angle 4$ and $\angle 5$ are alternate interior angles.
5. 28° , 129° , 23°
6. 68° , 68° , 44°
7. 60° , 60° , 60°
8. 130°
9. The exterior angle can have any measure greater than 15° and less than 180° .
10. 90° , 125° , 100° , 100° , 125°
11. 71° , 111° , 88° , 90°
12. no; The triangles do not have the same angle measures.
13. yes; The two triangles have two pairs of congruent angles.

14. *Sample answer:*

- 1) The given angle and $\angle 3$ are supplementary, so $\angle 3 = 115^\circ$; $\angle 3$ and $\angle 5$ are alternate interior angles, so $\angle 3 = \angle 5 = 115^\circ$.
- 2) The given angle and $\angle 8$ are alternate exterior angles, so $\angle 8 = 65^\circ$; $\angle 5$ and $\angle 8$ are supplementary, so $\angle 5 = 115^\circ$.

15. 60 m