Answers

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 $\angle 3 = 115°$; $\angle 3$ and $\angle 5$ are alternate interior angles, so $\angle 3 = \angle 5 = 115°$.
    2) The given angle and $\angle 8$ are alternate exterior angles, so $\angle 8 = 65°$; $\angle 5$ and $\angle 8$ are supplementary, so $\angle 5 = 115°$.
15. 60 m