

Answers

1. $\angle 2 = 82^\circ$; $\angle 2$ and the given angle are alternate exterior angles.
2. $\angle 6 = 82^\circ$; $\angle 6$ and the given angle are vertical angles.
3. $\angle 4 = 82^\circ$; $\angle 4$ and the given angle are corresponding angles.
4. $\angle 1 = 98^\circ$; $\angle 4$ and $\angle 1$ are supplementary.
5. 123° ; $\angle 1$ and $\angle 7$ are alternate exterior angles.
6. 122° ; $\angle 2$ and $\angle 8$ are alternate interior angles and $\angle 8$ and $\angle 5$ are supplementary.
7. 119° ; $\angle 5$ and $\angle 3$ are alternate interior angles.
8. 60° ; $\angle 4$ and $\angle 6$ are alternate exterior angles.
9. 60° ; 60° ; 60°
10. 115° ; 40° ; 25°
11. 45° ; 45° ; 90°
12. 105°
13. 60°
14. $\angle 1 = 108^\circ$, $\angle 2 = 108^\circ$;
Because of alternate interior angles, the angle below $\angle 1$ is 72° . This angle is supplementary to both $\angle 1$ and $\angle 2$.
15. Exterior angle with wall:
 $180 - 15 = 165^\circ$;
Exterior angle with ground:
 $180 - 5(15) = 105^\circ$;
 $x + 5x + 90 = 180$
 $x = 15$