

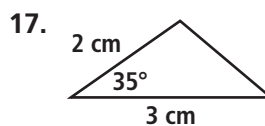
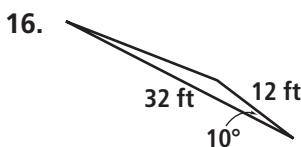
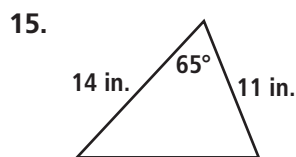
Practice 14-4

Area and the Law of Sines

Use the Law of Sines. Find the measure of the indicated part of each triangle. Round answers to the nearest tenth.

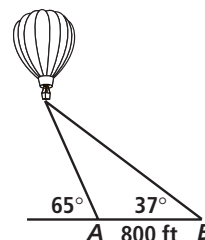
- Find $m\angle X$ if $x = 10$, $y = 12$, and $m\angle Y = 18^\circ$.
- Find x if $y = 21$, $m\angle X = 31^\circ$, and $m\angle Y = 43^\circ$.
- Find z if $y = 15$, $m\angle Y = 79^\circ$, and $m\angle Z = 79^\circ$.
- Find $m\angle Z$ if $y = 23$, $z = 19$, and $m\angle Y = 123^\circ$.
- Find y if $z = 54$, $m\angle Y = 65^\circ$, and $m\angle Z = 21^\circ$.
- Find $m\angle Y$ if $y = 36$, $z = 42$, and $m\angle Z = 39^\circ$.
- Find $m\angle X$ if $x = 54$, $z = 63$, and $m\angle Z = 33^\circ$.
- Find x if $z = 18$, $m\angle X = 25^\circ$, and $m\angle Z = 31^\circ$.
- Find x if $y = 20$, $m\angle X = 30^\circ$, and $m\angle Y = 60^\circ$.
- Find $m\angle X$ if $x = 63$, $y = 72$, and $m\angle Y = 45^\circ$.
- Find $m\angle Z$ if $y = 7$, $z = 3$, and $m\angle Y = 31^\circ$.
- Find x if $y = 35$, $m\angle X = 118^\circ$, and $m\angle Y = 20^\circ$.
- Find $m\angle X$ if $x = 9$, $y = 15$, and $m\angle Y = 62^\circ$.
- Find y if $z = 70$, $m\angle Y = 25^\circ$, and $m\angle Z = 100^\circ$.

Find the area of each triangle.



18. A triangle has sides of lengths 15 in. and 22 in., and the measure of the angle between them is 95° . Find the area of the triangle.

19. A hot-air balloon is observed from two points, A and B , on the ground 800 ft apart as shown in the diagram. The angle of elevation of the balloon is 65° from point A and 37° from point B . Find the distance from point A to the balloon.



20. Two searchlights on the shore of a lake are located 3020 yd apart as shown in the diagram. A ship in distress is spotted from each searchlight. The beam from the first searchlight makes an angle of 38° with the baseline. The beam from the second light makes an angle of 57° with the baseline. Find the ship's distance from each searchlight.

