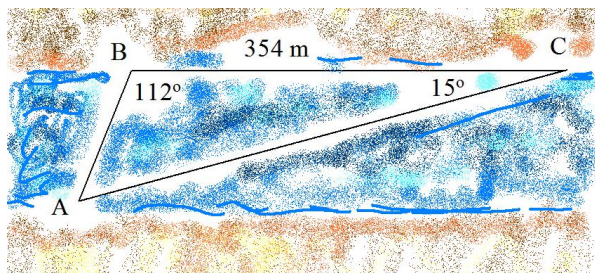


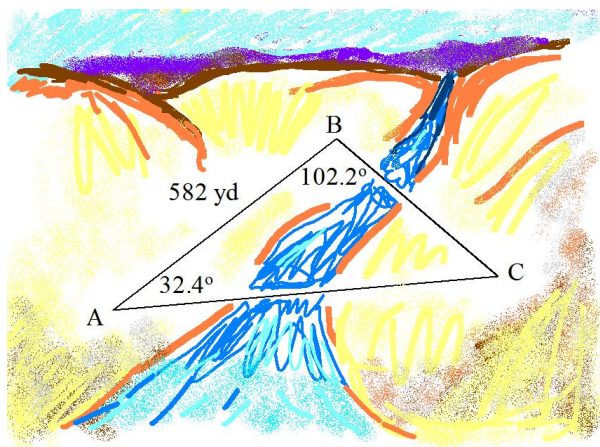
7.1 Oblique Triangles and the Law of Sines

Determine the remaining sides and angles of each triangle ABC .

1. $A = 68.41^\circ$, $B = 54.23^\circ$, $a = 12.75$
2. $C = 74.08^\circ$, $B = 69.38^\circ$, $c = 45.3$
3. $A = 87.2^\circ$, $b = 75.9$, $C = 74.3^\circ$
4. $B = 38.2^\circ$, $a = 19.7$, $C = 19.7^\circ$
5. $B = 20.4^\circ$, $C = 103.1^\circ$, $b = 132$
6. $A = 35.3^\circ$, $B = 52.8^\circ$, $b = 675$
7. *Distance Across a River.* To find the distance AB across a river, a surveyor laid off a distance $BC = 354$ m on one side of the river. It is found that $B = 112^\circ$ and $C = 15^\circ$. Find AB .



8. *Distance Across a Canyon.* To determine the distance BC across a deep canyon, Rhonda lays off a distance $AB = 582$ yd. She then finds that $A = 32.4^\circ$ and $B = 102.2^\circ$. Find BC .



7.2 Oblique Triangles and the Law of Cosines

Solve each triangles.

1. $A = 41.4^\circ$, $b = 2.78$, $c = 3.92$
2. $C = 28.3^\circ$, $b = 5.71$, $a = 4.21$
3. $C = 45.6^\circ$, $b = 8.94$, $a = 7.23$
4. $A = 67.3^\circ$, $b = 37.9$, $c = 40.8$
5. $a = 9.3$, $b = 5.7$, $c = 8.2$
6. $a = 28$, $b = 47$, $c = 58$
7. $a = 42.9$, $b = 37.6$, $c = 62.7$
8. $a = 189$, $b = 214$, $c = 325$