

WS 4.2 - The Ambiguous Case

Solve each triangle. Round your answers to the nearest tenth.

1) In $\triangle CAB$, $m\angle C = 49^\circ$, $b = 27$ mi, $c = 5$ mi

3) In $\triangle STR$, $m\angle S = 19^\circ$, $r = 33$ in, $s = 31$ in

5) In $\triangle TRS$, $m\angle T = 138^\circ$, $s = 10$ km, $t = 43$ km

7) In $\triangle BCA$, $m\angle B = 146^\circ$, $a = 16$ cm, $b = 5$ cm

2) In $\triangle EFD$, $m\angle E = 64^\circ$, $m\angle F = 9.5^\circ$, $d = 29$ m

4) In $\triangle BCA$, $m\angle B = 33^\circ$, $a = 35$ km, $b = 31$ km

6) In $\triangle YZX$, $m\angle Y = 125^\circ$, $m\angle X = 37^\circ$, $z = 17$ ft

8) In $\triangle RST$, $m\angle R = 108^\circ$, $t = 27$ mi, $r = 31$ mi

Answers to WS 4.2 - The Ambiguous Case

- 1) Not a triangle 2) $m\angle D = 106.5^\circ$, $e = 27.2$ m, $f = 5$ m
3) $m\angle T = 140.7^\circ$, $m\angle R = 20.3^\circ$, $t = 60.3$ in 4) $m\angle C = 109.1^\circ$, $m\angle A = 37.9^\circ$, $c = 53.8$ km
 Or $m\angle T = 1.3^\circ$, $m\angle R = 159.7^\circ$, $t = 2.2$ in Or $m\angle C = 4.9^\circ$, $m\angle A = 142.1^\circ$, $c = 4.9$ km
5) $m\angle R = 33^\circ$, $m\angle S = 9^\circ$, $r = 35$ km 6) $m\angle Z = 18^\circ$, $x = 33.1$ ft, $y = 45.1$ ft
7) Not a triangle 8) $m\angle S = 16.1^\circ$, $m\angle T = 55.9^\circ$, $s = 9$ mi