

Solve the triangle.

1) $A = 70^\circ, B = 10^\circ, a = 2$

1) _____

2) $B = 20^\circ, C = 70^\circ, a = 5$

2) _____

Two sides and an angle are given. Determine whether the given information results in one triangle, two triangles, or no triangle at all. Solve any triangle(s) that results.

3) $A = 30^\circ, a = 13, b = 26$

3) _____

4) $a = 7, b = 9, B = 49^\circ$

4) _____

5) $C = 35^\circ, a = 18.7, c = 16.1$

5) _____

Solve the problem.

6) A rocket tracking station has two telescopes A and B placed 1.2 miles apart. The telescopes lock onto a rocket and transmit their angles of elevation to a computer after a rocket launch. What is the distance to the rocket from telescope B at the moment when both tracking stations are directly east of the rocket telescope A reports an angle of elevation of 21° and telescope B reports an angle of elevation of 57° ?

6) _____

(One of the following will be the correct answer:

A) 0.73 mi

B) 0.51 mi

C) 2.81 mi

D) 1.71 mi)

7) A flagpole is perpendicular to the horizontal but is on a slope that rises 10° from the horizontal. The pole casts a 43-foot shadow down the slope and angle of elevation of the sun measured from the slope is 36° . How tall is the pole? Round your answer to the nearest 0.1 foot.

7) _____

(One of the following will be the correct answer:

A) 35.4 ft

B) 36.4 ft

C) 33.5 ft

D) 36.2 ft)