

Solve the triangle.

1) (SAS triangle)  $b = 5, c = 6, A = 75^\circ$

1) \_\_\_\_\_

2) (SAS triangle)  $b = 3, c = 4, A = 80^\circ$

2) \_\_\_\_\_

3) (SSS triangle)  $a = 19, b = 16, c = 11$

3) \_\_\_\_\_

Solve the problem.

4) Two points A and B are on opposite sides of a building. A surveyor selects a third point C to place a transit. Point C is 46 feet from point A and 61 feet from point B. The angle ACB is  $54^\circ$ . How far apart are points A and B?

4) \_\_\_\_\_

5) Island A is 150 miles from island B. A ship captain travels 250 miles from island A and then finds that he is off course and 160 miles from island B. What angle, in degrees, must he turn through to head straight for island B? Round the answer to two decimal places. (Hint: Be careful to properly identify which angle is the turning angle.)

5) \_\_\_\_\_

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Answers:

1)  $a = 6.74, B = 45.8^\circ, C = 59.2^\circ$

2)  $a = 4.56, B = 40.4^\circ, C = 59.6^\circ$

3)  $A = 87.4^\circ, B = 57.3^\circ, C = 35.3^\circ$

4) 50.4 ft

5)  $145.08^\circ$