

Review Problems for Chapter 7

The following problems refer to triangle ABC that is not necessarily a right triangle.

1. $A = 35^\circ$, $B = 85^\circ$, and $b = 18.5$ in., solve the triangle.
2. $C = 75.5^\circ$, $a = 7.45$ cm, and $b = 10.2$ cm, solve the triangle.
3. $a = 9.23$ ft, $b = 11.7$ ft, and $c = 17.6$ ft, find the largest angle.
4. $A = 31.4^\circ$, $a = 22.2$ m, and $b = 18.8$ m, solve the triangle.
5. $A = 17^\circ$, $B = 49^\circ$, and $c = 11.4$ yd, find the area of the triangle.
6. $a = 6.6$ in, $b = 9.9$, and $c = 13$ in, find the area of the triangle.
7. Points A and B are on opposite sides of a lake. Point C is located 276 ft from A and 205 ft from B. The angle at A from AB to AC is 46.5° . Find distance of AB.
8. A boat traveling at 18 mph heads N 43° W for one hour and then changes course. It travels N 32° E for 1.5 hours. How far is the boat from the starting point?
9. Find the magnitude of the vector $\langle -2, 5 \rangle$.
10. Find the dot product of V and U if $v = 2i + 3j$ and $U = i - 2j$.
11. Find the angle θ between V and U if $V = 7i + j$ and $U = 2i - 5j$.

CH.7 ANSWERS

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| 1. $C=60^\circ$, $c=16.1$ in, $a=10.7$ in | 2. $c=11$ cm, $A=40.9^\circ$, $B=63.6^\circ$ | 3. $C=114^\circ$ | 4. $B=26.2^\circ$, $C=122.4^\circ$, $c=36$ m |
| 5. 15.7 sq. yd. | 6. 31.9 in sq. | 7. 234 or 146 ft | 8. 36 miles |
| 9. $\sqrt{29}$ | 10. -4 | 11. 76° | |