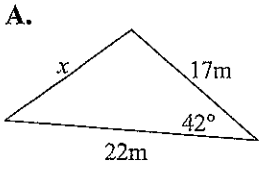
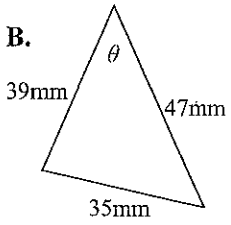
LAW OF COSINES WORKSHEET

1. Solve for the unknown in each triangle. Round to the nearest hundredth.

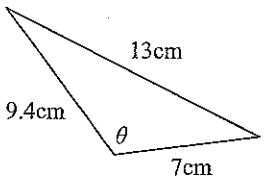
A.



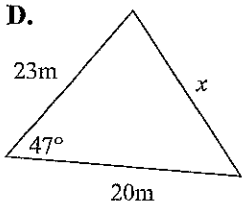
B.



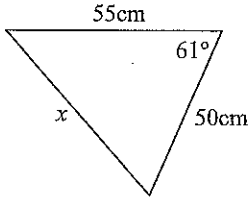
C.



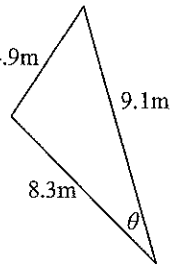
D.



E.



F.



2. Solve for **all** missing sides and angles in each triangle. Round to the nearest hundredth. ** USE PROPER VARIABLES

A. ΔXYZ: $x = 29m, y = 15m, \angle Z = 122°$

B. ΔGHI: $g = 13cm, h = 8cm, i = 15cm$

C. ΔMNO: $n = 31m, o = 28m, \angle M = 62°$

3. A triangle has sides equal to 4 m, 11 m and 8 m. Find its angles (round answers to nearest tenth)

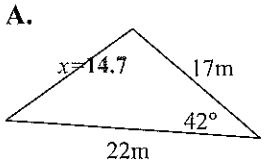
4. A ship leaves port at 1 pm traveling north at the speed of 30 miles/hour. At 3 pm, the ship adjusts its course on a bearing of N 20° E. How far is the ship from the port at 4pm? (round to the nearest unit).

5. Find the area of the triangle whose sides are 12cm., 5cm. and 13cm.

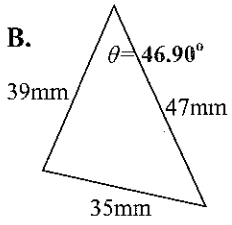
LAW OF COSINES WORKSHEET ANSWER KEY

1. Solve for the unknown in each triangle. Round to the nearest hundredth.

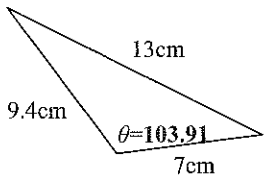
A.



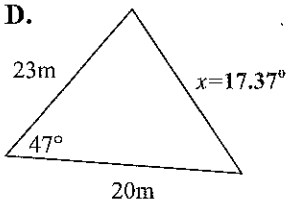
B.



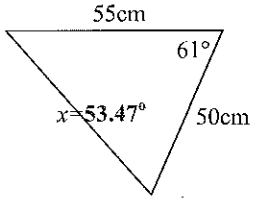
C.



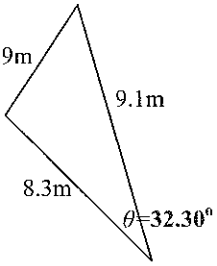
D.



E.



F.



2. Solve for **all** missing sides and angles in each triangle. Round to the nearest hundredth. ** USE PROPER VARIABLES

A. ΔXYZ: $x = 29m, y = 15m, \angle Z = 122°$
z=39.08m **<X= 38.99°** **<Y =19.01°**

B. ΔGHI: $g = 13cm, h = 8cm, i = 15cm$
<G=60° **<H=32.20°** **<I=87.80°**

C. ΔMNO: $n = 31m, o = 28m, \angle M = 62°$
m=30.50 **<N=63.83°** **<O=54.16°**

3. A triangle has sides equal to 4 m, 11 m and 8 m. Find its angles (round answers to nearest tenth) **16.21°, 129.84°, 33.95°**

4. A ship leaves port at 1 pm traveling north at the speed of 30 miles/hour. At 3 pm, the ship adjusts its course on a bearing of N 20° E. How far is the ship from the port at 4pm? (round to the nearest unit). **88.79 miles**

5. Find the area of the triangle whose sides are 12cm., 5cm. and 13cm. **30.00 cm^2**