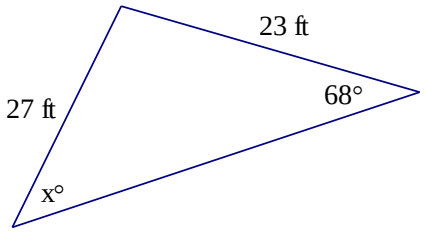
Pre-Calculus Law of Sines and Cosines Practice

Solve for the unknown side or angle. Round to the nearest tenth.

1.



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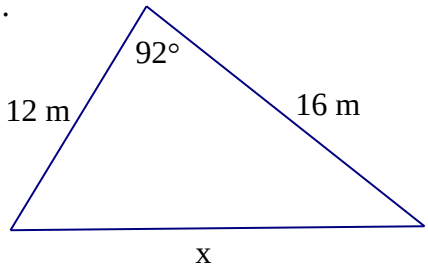

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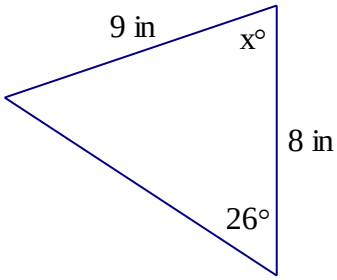

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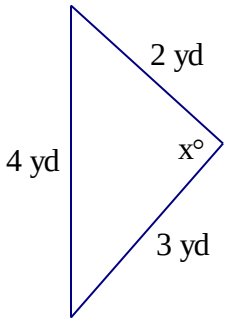
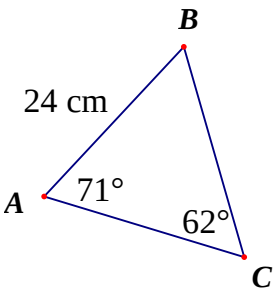


Solve each triangle (find all of the missing sides and angles). Round to the nearest tenth.

5.



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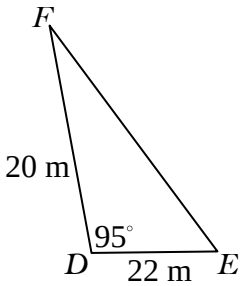

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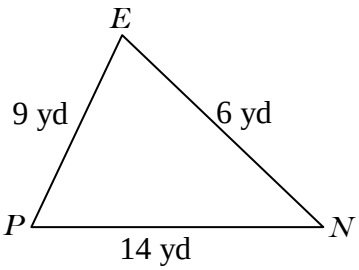

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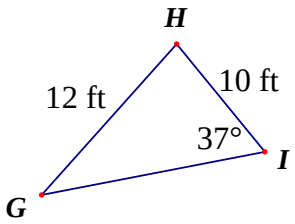

Some information from ΔABC is given. Find the missing sides and angles. Round to the nearest tenth.

9. $A = 28^\circ,\ b = 23\,\text{cm},\ c = 8\,\text{cm}$

10. $B = 128^\circ,\ a = 16\,\text{ft},\ c = 24\,\text{ft}$

11. $A = 36^\circ, B = 53^\circ, b = 17\ \text{m}$

12. $A = 55^\circ,\ b = 12\,\text{mi},\ c = 7\,\text{mi}$

13. $a = 3.3\,\text{in},\ b = 7.6\,\text{in},\ c = 6.4\,\text{in}$

14. $A = 58^\circ, a = 27\,\text{in}, b = 25\,\text{in}$

Law of Sines and Cosines Practice – Answers

1. $x = 52.2^\circ$ 2. $x = 20.3\,\text{m}$

3. $x = 131.1^\circ$ 4. $x = 104.5^\circ$

5. $m\angle B = 47^\circ, a = 25.7\,\text{cm}, b = 19.9\,\text{cm}$

6. $d = 31.0\ \text{m},\ m\angle E = 40.0^\circ, m\angle F = 45.0^\circ$

7. $m\angle E = 137.0^\circ, m\angle N = 26.0^\circ, m\angle P = 17.0^\circ$

8. $m\angle G = 30.1^\circ, m\angle H = 112.9^\circ, h = 18.4\,\text{ft}$

9. $B = 138.7^\circ,\ C = 13.3^\circ,\ a = 16.4\,\text{cm}$

10. $A = 20.4^\circ,\ C = 31.6^\circ,\ b = 36.1\,\text{ft}$

11. $C = 91^\circ, a = 12.5\,\text{m}, c = 21.3\,\text{m}$

12. $a = 9.8\,\text{mi},\ B = 89.1^\circ,\ C = 35.9^\circ$

13. $A = 25.5^\circ,\ B = 98.0^\circ,\ C = 56.5^\circ$

14. $m\angle B = 51.7^\circ, m\angle C = 70.3^\circ, h = 30.0\,\text{in}$