Handout 4: The Laws of the Land

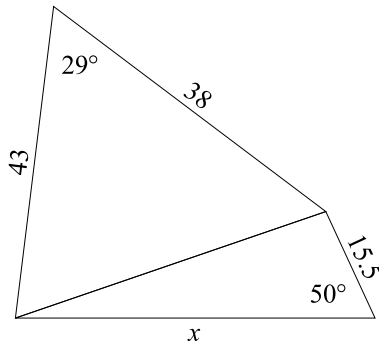

Figure 1
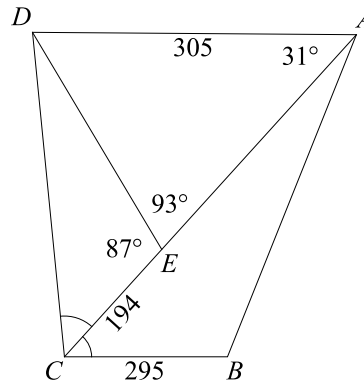

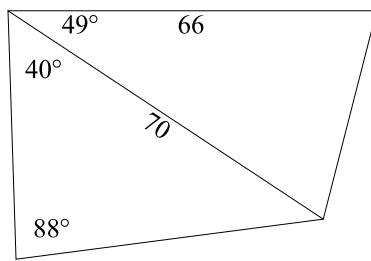Figure 2

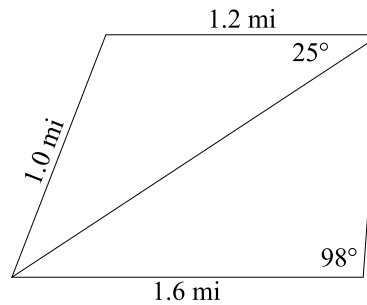Figure 3

Figure 4

1. In $\triangle QRS$, $\angle Q = 47°$ and $\angle R = 101°$. If side $q = 5.2$, find side r to the nearest tenth.

2. In $\triangle DEF$, $d = 24$ and $e = 17$. If $\angle D = 65°$, find $\angle E$ to the nearest tenth of a degree.

3. The three sides of a triangle are 7, 9, and 11. Find all the angles in the triangle.

4. Solve the triangle $\triangle ABC$ to the nearest tenth if $\angle A = 62°$, $c = 9$, and $b = 14$.

5. Find the value of *x* in Figure 1, to the nearest tenth.

6. Find the perimeter of the quadrilateral *ABCD* in Figure 2, to the nearest whole number.

7. Does the Law of Sines work for all triangles? If not, why not?

8. What happens to the Law of Cosines with right triangles? Why?

9. Mr. Parker wants fencing around his whole property shown in Figure 3. What length of fence will he need to the nearest foot?

10. Rather than jog around a field, Humphrey chooses to jog along the marked path that cuts through Figure 4. How far did Humphrey jog? How much more would he have had to jog by going around the field instead of through it?