

ALGEBRA II
Chapter 13 section 6
Apply the Law of Cosines
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FOCUS:

In which cases can the law of cosines be used to solve a triangle?

VOCAB:

Law of Cosines: _____

WARM – UP:

Solve $\triangle ABC$ with the given parts.

1. $A = 75^\circ$, $B = 82^\circ$, $c = 16$

2. $B = 131^\circ$, $b = 52$, and $c = 38$

3. Two sides of a triangular lot are each 80 feet long, and the angle between these two sides is 110° . Find the area of the lot.

NOTES:

Solve $\triangle ABC$ with...

$a = 22$

$b = 15$

$C = 108^\circ$

$a = 19$

$b = 26$

$c = 31$

The lengths of the sides of a triangular plot of land are 120 feet, 150 feet, and 175 feet. Find the largest angle of the triangle.

HERON'S AREA FORMULA

The area of the triangle with sides of length a , b , and c is

$$\text{Area} = \sqrt{s(s-a)(s-b)(s-c)}$$

where $s = \frac{1}{2}(a + b + c)$. The variable s is called the semiperimeter, or half - perimeter, of the triangle.

Find the area of traffic triangle with sides 750 feet, 410 feet, and 620 feet.

Let's see if you comprehended what we worked on in class...

Try _____ for homework