

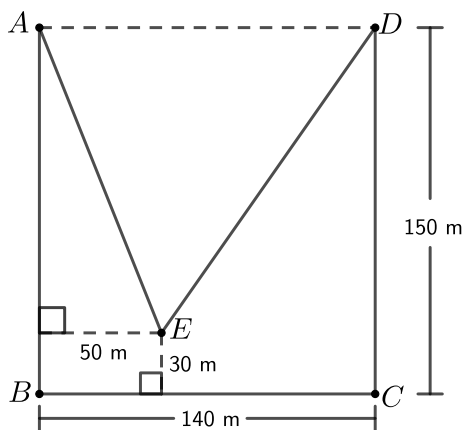


## Problem of the Week

### Problem C

#### Around the Farm

Rahul has a farm he wishes to fence. The farm is the pentagon  $ABCDE$ , shown below. He knows that  $ABCD$  is a 140 m by 150 m rectangle, as shown below. He also knows that  $E$  is 50 m from the side  $AB$  and 30 m from the side  $BC$ . Determine the length of  $AE$ , the length of  $DE$ , and the perimeter of pentagon  $ABCDE$ .



NOTE: The *Pythagorean Theorem* states, “In a right-angled triangle, the square of the length of hypotenuse (the side opposite the right angle) equals the sum of the squares of the lengths of the other two sides”.

In the following right triangle,  $p^2 = r^2 + q^2$ .

