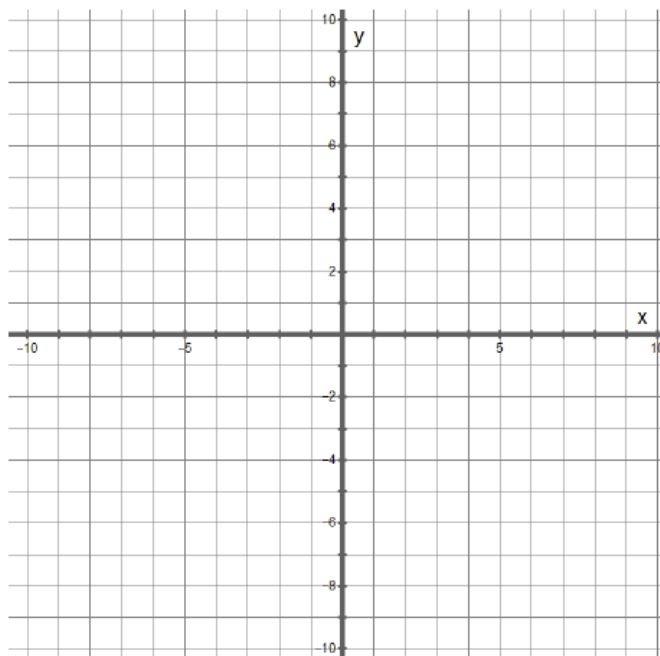22. $\triangle ABC$ has vertices $A(-6,-1)$, $B(-1,-1)$, and $C(-5,-4)$. If $\triangle ABC$ is reflected over the line $y=-\dfrac{1}{2}x+1$ to form $\triangle A'B'C'$, find the sum $CB'+AC'$.

(A) $5+\sqrt{10}$
(B) $\sqrt{74}+\sqrt{178}$
(C) $7\sqrt{2}+\sqrt{85}$
(D) 29
(E) $\sqrt{85}+\sqrt{130}$

University of Houston
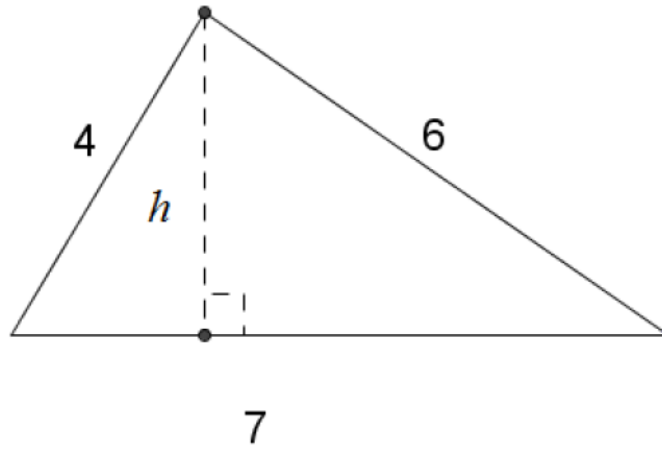High School Mathematics Contest

You have to show the details of your work not just the answer.

Project on Area of a triangle Wk 19:

adapted from Pre-calc. UH math contest 2015

22. Give the value h shown below.

a) Evaluate the value of side h.
b) Evaluate the area of the small triangle
c) Evaluate percent of the area represented by the small triangle.
d) What is the probability that if you throw a dart it will land triangle which has the hypotenuse of 6?

Hint: Use one of your downloads from Wk 18. (Heron's formula)

Due Saturday 1/14/2017 @ 11:59pm.