1. Your new widescreen TV has a display that measures 43.5 inches (wide) by 24.5 inches (tall).

(a) A standard TV image is $4/3$ as wide as it is tall. What are the measurements of the largest image without distortion that will fit in the widescreen display?

(b) So when you watch "Jeopardy" on your new TV, what is the diagonal measurement of the image?

2. You decide to watch "Good Will Hunting". This movie image is 1.85 times as wide as it is tall. Unfortunately the DVD version is not formatted for widescreen TV. This means that the image which would have almost perfectly filled your widescreen display has been scaled down to fit inside a standard TV image, with black bars above and below (letterboxed), like this:

What will be the dimensions and the diagonal measurement of the actual image you'll see?