Properties of Exponents and Roots - Guided Lesson Explanation

Explanation #1:

Step 1) We have to rewrite the root in exponent form. If we remember, the root form and exponent form are the inverse of one another. That means that:

$^4\sqrt{5} = 5^{1/4}$

Step 2) Calculate the value.

$5^{1/4}$ =   1.50

Explanation #2:

Step 1) We first have to find the end value and rewrite in exponent form.

$(9^{1/2})^2$ We can combine the values into one exponent.

        This can be rewritten as:

$9^{(1/2 \times 2)}$

(9^1) Any exponent to the power one is itself.

9

Explanation #3:

Step 1) Realize that this is no different than the last problem. We can combine the values in the same manner.

$(25^{1/4})^{4/2} = 25^{\frac{1}{4} \times \frac{4}{2}} = (25)^{1/2}$ The inverse of an exponent is its root.

$= {}^2\sqrt{25}$

$= 5$