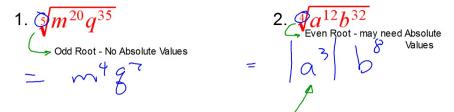
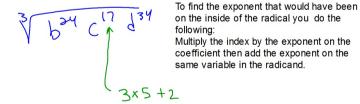
## Simplify each. Use Absolute Value symbols where needed.

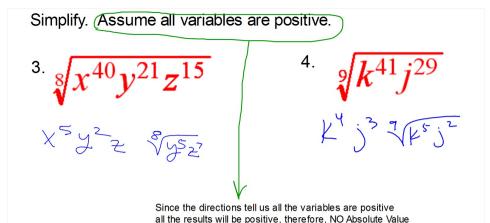


Remember, you must make sure that what ever comes out of these even radicals is positive. This means that when a variable ends up with an odd exponent after doing the root, it needs to be placed inside Absolute Value symbols to ensure that it is coming out positive.

? = 
$$b^8 c^5 d^{11} \sqrt[3]{c^2 d}$$

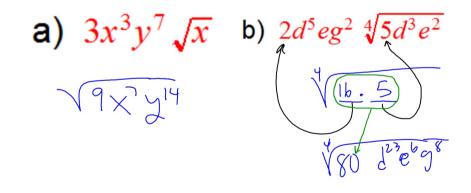
What was the original problem that produced the answer shown above?





symbols need to be used regardless of what the index is.

Find the original probem that gave the following simplified answers.



$$\sqrt{20} = \sqrt{4 \cdot 5} = \sqrt{4} \cdot \sqrt{5} = 2\sqrt{5}$$

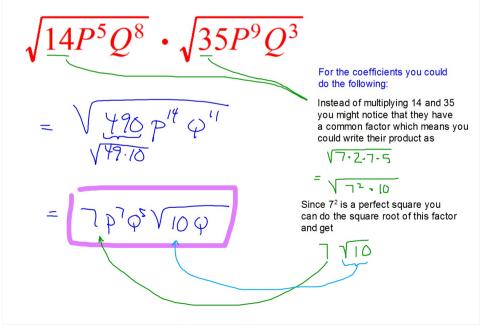
Simplifying this way uses a Property of Exponents shown below.

Property of Exponents: If 
$$\sqrt[n]{a}$$
 and  $\sqrt[n]{b}$  are real #'s, then

$$\sqrt[n]{ab} = \sqrt[n]{a} \cdot \sqrt[n]{b}$$

You can take a single radical and break it into multiple radicals all with the same index.

## Simplify. Assume all variables are positive.



## Sec 7-2: Multiplying and Dividing Radical Expressions.

Simplify. Assume all variables are positive.

You could multiply first then do the square root

If  $\sqrt[n]{a}$  and  $\sqrt[n]{b}$  are real #'s, then

$$\sqrt[n]{ab} = \sqrt[n]{a} \cdot \sqrt[n]{b}$$

this also works in the other direction:

$$\sqrt[n]{a} \cdot \sqrt[n]{b} = \sqrt[n]{ab}$$