

Fill in the tables below **WITHOUT** using a calculator.

Given	Rewrite	Multiply	Simplify
1. $100^{1/2}$			
2. $27^{1/3}$			
3. $16^{1/4}$			
4. $25^{3/2}$			
5. $64^{3/2}$			
6. $64^{2/3}$			
7. $9^{-1/2}$			
8. $1000^{-2/3}$			
9. $8^{-4/3}$			

Given	Convert to Exponent	Rewrite	Multiply	Simplify
1. $\sqrt[3]{8}$				
2. $\sqrt[3]{27}$				
3. $\sqrt[4]{81}$				
4. $\sqrt{4^3}$				
5. $\sqrt{4^2}$				
6. $\sqrt[3]{4^3}$				
7. $\sqrt[4]{64^3}$				
8. $\sqrt{64^3}$				
9. $\sqrt[4]{10000^{-1}}$				

When is it appropriate to use technology to evaluate a radical or fractional exponent? Give a specific example of both.

Use Technology to evaluate the following. Round all decimals to the nearest thousandth (**three decimal places**)

Given	Estimate to three decimals.
$25^{1/3}$	
$16^{2/5}$	
$\sqrt{10}$	
$\sqrt[3]{49}$	
$3^{-1/2}$	

As discussed in class, the **definition of a square root** answers the question “what number multiplied by itself gives me the radicand?” That said explain why these two square roots have vastly different answers.

$$\sqrt{36} \text{ and } \sqrt{-36}$$