

Check Up

Simplify the following, expressing each as an exact value.

Entire Radical	Show all steps	Mixed Radical
$\sqrt{300}$		
3√40		
$\sqrt{\frac{54}{3}}$		



Compare your answers.

Simplify the following, expressing each as an exact value.

Entire Radical	Show all steps	Mixed Radical
$\sqrt{300}$	$\sqrt{300} = \sqrt{100 \times 3} = \sqrt{10^2} \times \sqrt{3}$ or	$10\sqrt{3}$
	300	
	2 150	
	2 2 75	
	2 2 5 3 5	
	$\sqrt{2 \times 2 \times 5 \times 5 \times 3} = \sqrt{2^2 \times 5^2 \times 3} = \sqrt{2^2} \times \sqrt{5^2} \times \sqrt{3} = 2 \times 5 \times \sqrt{3}$	
$\sqrt[3]{40}$	$\sqrt[3]{40} = \sqrt[3]{8 \times 5} = \sqrt[3]{8} \times \sqrt[3]{5} = \sqrt[3]{2^3} \times \sqrt[3]{5}$	$2\sqrt[3]{5}$
	or 40	
	2 20	
	2 2 10	
	$\sqrt[3]{2\times2\times2\times5} = \sqrt[3]{2^3\times5} = \sqrt[3]{2^3}\times\sqrt[3]{5}$	
$\sqrt{\frac{54}{3}}$	$\sqrt{\frac{54}{3}} = \sqrt{18} = \sqrt{9 \times 2} = \sqrt{3^2 \times 2} = \sqrt{3^2} \times \sqrt{2}$	$3\sqrt{2}$
	or	
	18	
	2 9 / ^	
	2 3 3	
	$\sqrt{3\times3\times2} = \sqrt{3^2\times2} = \sqrt{3^2}\times\sqrt{2}$	