

Practice

1. List all the perfect squares that are factors of each number. Do not include 1.

a) 18: _____ b) 24: _____ c) 48: _____ d) 98: _____

2. List all the perfect cubes that are factors of each number. Do not include 1.

a) 32: _____ b) 48: _____ c) 54: _____ d) 108: _____

3. Click the expression you would use to simplify each radical at the left.

a) $\sqrt{24}$	$\sqrt{2 \cdot 12}$	$\sqrt{3 \cdot 8}$	$\sqrt{4 \cdot 6}$
b) $\sqrt{108}$	$\sqrt{2 \cdot 54}$	$\sqrt{3 \cdot 36}$	$\sqrt{4 \cdot 27}$
c) $\sqrt[3]{40}$	$\sqrt[3]{2 \cdot 20}$	$\sqrt[3]{4 \cdot 10}$	$\sqrt[3]{5 \cdot 8}$
d) $\sqrt[3]{162}$	$\sqrt[3]{2 \cdot 81}$	$\sqrt[3]{3 \cdot 54}$	$\sqrt[3]{6 \cdot 27}$

4. Simplify each radical.

a) $\sqrt{320} =$

b) $\sqrt{735} =$

c) $\sqrt[3]{189} =$

d) $\sqrt[3]{576} =$

5. a) Write each number as the product of its prime factors.

i) $96 =$ _____ ii) $200 =$ _____

b) Use each product in part a to simplify each radical.

i) $\sqrt{96} =$

ii) $\sqrt[3]{200} =$

6. Write each mixed radical as an entire radical.

a) $3\sqrt{11} =$

b) $2\sqrt{13} =$

c) $3\sqrt[3]{4} =$

d) $2\sqrt[3]{15} =$