

## Warm Up Questions

1. Write the following as a mixed radical  $\sqrt{300}$

2. Write the following as an entire radical

$$3\sqrt{10}$$

3. Write the following in order of least to greatest.

$$4\sqrt{6}, 2\sqrt{8}, -3\sqrt{7}, 9\sqrt{2}, 10\sqrt{2}$$

1. Write the following as a mixed radical  $\sqrt{300}$

$$\sqrt{300} \Rightarrow \sqrt{2 \times 2 \times \underline{3} \times 5 \times 5}$$

$$2 \times 5 \sqrt{3}$$

$$10\sqrt{3}$$

2. Write the following as an entire radical

$$\begin{aligned} & 3\sqrt{10} \\ & \sqrt{10 \times 3 \times 3} \\ & = \sqrt{90} \end{aligned}$$

3. Write the following in order of least to greatest.

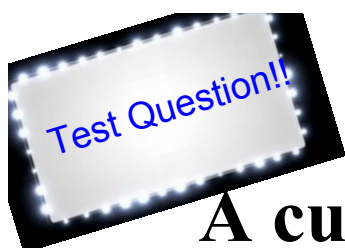
$$4\sqrt{6}, 2\sqrt{8}, -3\sqrt{7}, 9\sqrt{2}, 10\sqrt{2 \times 10 \times 10}$$

$$\sqrt{6 \times 4 \times 4} \quad \sqrt{8 \times 2 \times 2} \quad -\sqrt{7 \times 3 \times 3} \quad \sqrt{2 \times 9 \times 9}$$

$$\sqrt{96}, \sqrt{32}, -\sqrt{63}, \sqrt{162}, \sqrt{200}$$

$$-\sqrt{63}, \sqrt{32}, \sqrt{96}, \sqrt{162}, \sqrt{200}$$

$$-3\sqrt{7}, 2\sqrt{8}, 4\sqrt{6}, 9\sqrt{2}, 10\sqrt{2}$$



A cube has a **volume** of  $875 \text{ cm}^3$ .  
Write the edge length of the cube  
as a radical in simplest form.

$$\rightarrow \sqrt[3]{875}$$

$$= \sqrt[3]{5 \times 5 \times 5 \times 7}$$

$$= 5\sqrt[3]{7}$$

Test Question

A cube has a **Surface Area** of **648 cm<sup>2</sup>**. Write the edge length of the cube as a radical in simplest form.

$$SA = S^2 \times 6$$

$$\rightarrow 648 / 6 = 108 \text{ cm}^2$$

$$\begin{aligned} \rightarrow \sqrt{108} &= \sqrt{2 \times 2 \times 3 \times 3 \times 3} \\ &= \sqrt{2 \times 2 \times 3 \times 3 \times 3} \\ &= 2 \times 3 \sqrt{3} \\ &= 6\sqrt{3} \end{aligned}$$

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**#4 a, b, c, d**

**#5 a, b, c, d**

**#11 a, b, c, d**

**#12 a, b, c**

**#20**

**#22**

<http://www.math-play.com/rational-and-irrational-numbers-game/rational-and-irrational-numbers-game.html>





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**#7**

**#8**

**#10 d, f, g, h**

**#11 a - d**

**#12 a, b, f, g, h**

**#16**

**#17**

