

# Operations with Radical Expressions Bell Work

## 1. Answer all questions.

a. What is the radicand in the expression  $\sqrt[4]{13}$ ?

b. What is the index in the expression  $\sqrt{xy}$ ?

c. What is the value of  $-\sqrt{121}$ ?

d. What is the value of  $-\sqrt[3]{\frac{27}{8}}$ ?

## 2. Simplify the radical expressions.

a)  $\sqrt{81} =$

b)  $\sqrt[3]{(-343x^3)} =$

c)  $\sqrt[3]{729} =$

## 3. Write T for true or F for false.

1.  $\sqrt[3]{48} = \sqrt[3]{4} * \sqrt[3]{8}$

b)  $\sqrt{33} * \sqrt{2} = \sqrt[4]{66}$

c)  $\sqrt{\frac{1}{4}} = \frac{1}{2}$

d)  $\sqrt[3]{\frac{x^3}{y^3}} = \frac{x}{y}$

## 4. Which radical expression is not in simplest form?

a.  $3\sqrt{6}$

b.  $6\sqrt{131}$

c.  $5\sqrt{12}$

d.  $\frac{1}{2}\sqrt{17}$

## 5. Write the simplest form of:

$$\frac{\sqrt{7}}{\sqrt{63}} =$$

# Operations with Radical Expressions Bell Work

## ANSWERS

### 1. Answer all questions.

a. What is the radicand in the expression  $\sqrt[4]{13}$ ? **13**

b. What is the index in the expression  $\sqrt{xy}$ ? **2**

c. What is the value of  $-\sqrt{121}$ ? **-11**

d. What is the value of  $-\sqrt[3]{\frac{27}{8}}$ ?  **$-\frac{3}{2}$**

### 2. Simplify the radical expressions.

b)  $\sqrt{81} = \mathbf{+9}$

b)  $\sqrt[3]{(-343x^3)} = \mathbf{-7x}$

c)  $\sqrt[3]{729} = \mathbf{+9}$

### 3. Write T for true or F for false.

2.  $\sqrt[3]{48} = \sqrt[3]{4} * \sqrt[3]{8}$  **F**

b)  $\sqrt{33} * \sqrt{2} = \sqrt[4]{66}$  **F**

c)  $\sqrt{\frac{1}{4}} = \frac{1}{2}$  **T**

d)  $\sqrt[3]{\frac{x^3}{y^3}} = \frac{x}{y}$  **T**

### 4. Which radical expression is not in simplest form?

a.  $3\sqrt{6}$

b.  $6\sqrt{131}$

c.  **$5\sqrt{12}$**

d.  $\frac{1}{2}\sqrt{17}$

### 5. Write the simplest form of:

$$\frac{\sqrt{7}}{\sqrt{63}} = \frac{\sqrt{7}}{\sqrt{9 * 7}} = \frac{\sqrt{7}}{3\sqrt{7}} = \mathbf{\frac{1}{3}}$$