

## Positive Integral Exponents of a Rational Number

### A. Choose the Correct Answer:

1. The value of  $\left(\frac{2}{3}\right)^2$  is:

a)  $\frac{4}{9}$

b)  $\frac{2}{9}$

c)  $\frac{9}{4}$

d)  $\frac{3}{2}$

2.  $\left(\frac{5}{7}\right)^3$  is equal to:

a)  $\frac{125}{343}$

b)  $\frac{15}{21}$

c)  $\frac{35}{343}$

d)  $\frac{25}{49}$

3. The value of  $\left(\frac{3}{4}\right)^1$  is:

a)  $\frac{3}{4}$

b)  $\frac{4}{3}$

c)  $\frac{1}{3}$

d)  $\frac{1}{4}$

4.  $\left(\frac{2}{5}\right)^4$  is:

a)  $\frac{16}{25}$

b)  $\frac{8}{25}$

c)  $\frac{16}{625}$

d)  $\frac{8}{125}$

5.  $\left(\frac{7}{9}\right)^2$  is equal to:

a)  $\frac{14}{81}$

b)  $\frac{49}{81}$

c)  $\frac{49}{72}$

d)  $\frac{63}{81}$

### B. Write the Missing Terms to Complete the Sentences:

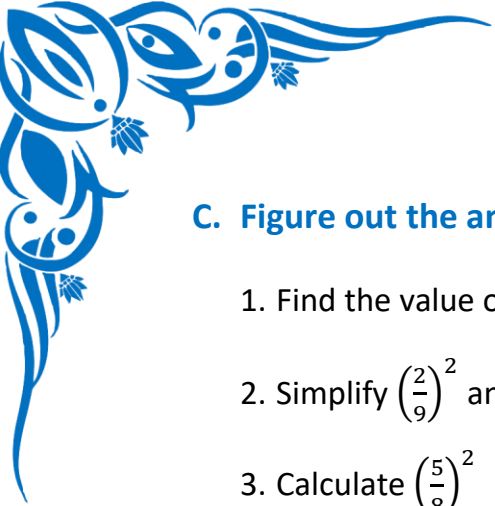
1.  $\left(\frac{a}{b}\right)^n = \frac{a^n}{\dots}$

2.  $\left(\frac{3}{5}\right)^2 = \frac{\dots}{25}$

3.  $\left(\frac{1}{2}\right)^3 = \dots$

4. Positive integral exponents represent repeated \_\_\_\_\_

5.  $\left(\frac{2}{7}\right)^1 = \dots$



**C. Figure out the answers to these questions:**

1. Find the value of  $\left(\frac{4}{5}\right)^3$
2. Simplify  $\left(\frac{2}{9}\right)^2$  and write it as a fraction
3. Calculate  $\left(\frac{5}{8}\right)^2$
4. Find  $\left(\frac{7}{11}\right)^3$
5. Evaluate  $\left(\frac{1}{3}\right)^4$

**D. Mark each sentence with a True (✓) or False (X):**

1.  $\left(\frac{a}{b}\right)^n = \frac{a^n}{b^n}$  for any positive integer n. \_\_\_\_\_
2.  $\left(\frac{2}{3}\right)^3 = \frac{2^3}{3^3}$ . \_\_\_\_\_
3.  $\left(\frac{5}{7}\right)^2 = \frac{5^2}{7^3}$ . \_\_\_\_\_
4.  $\left(\frac{1}{2}\right)^5 = \frac{1}{32}$ . \_\_\_\_\_
5. Positive integral exponents represent division. \_\_\_\_\_

**E. Challenge yourself with these questions:**

1. Find the value of  $\left(\frac{3}{7}\right)^3$
2. Simplify  $\left(\frac{5}{6}\right)^2$  and express it as a fraction
3. Calculate  $\left(\frac{2}{5}\right)^3$
4. Find the cube of  $\left(\frac{4}{9}\right)$
5. Evaluate  $\left(\frac{7}{8}\right)^2$