

# 13 Maths

## Exponents and Powers

Grade - 7

Practice Worksheet

### Very short answer

1. Simplify :

a.  $(-4/5)^3 \div (3/5)^4$

b.  $\{(5/2)^3 \times 3/25\} \div (5/9)^2$

2. Express each of the given numbers in exponential form.

a. 100

b. 1125

c. -16/81

d. 121/289

3. Evaluate :-

a.  $2^4$

b.  $(1/2)^5$

4. State the greater of each pair.

a.  $2^3, 3^2$

b.  $(-5/6)^3, (-2/5)^4$

5. Write the reciprocal of the exponential form of the given numbers.

a. 625/81

b.  $(12^2 - 11^2) + 2$

6. Evaluate:

a.  $2^{-3} \div 2^{-5}$

b.  $5^6 \div 5^{-1}$

c.  $(-1/4)^{-2} \div (-1/4)^2$

d.  $(2/5)^7 \div (2/5)^7$

7. Evaluate :

### 13 - Exponents and Powers

### Practice Worksheet

a.  $(-3 \times 4)^2$

b.  $(-1 \times 3)^4$

c.  $12^5/4^5$

8. Write the following numbers in standard form.

a. 1270000

b. 89503650129

c. 0.95390057

d. 0.00000000006

#### Short answer

1. Show that law II holds for :

a.  $3^2 \div 3^5 = 1/3^3$

b.  $(-5)^3 \div (-5)^5 = 1/25$

c.  $(-5/9)^5 / (-5/9)^7 = 81/25$

2. Show that law III holds for :

a.  $(2^2)^3 = 64$

b.  $\{(-2/3)^2\}^3 = (-2/3)^6$

3. Show that law I holds for :

a.  $3^2 \times 3^4 = 3^6$

b.  $(3/4)^2 \times (3/4)^3 = (3/4)^5$

4. Find the value of x using suitable rules of indices.

a.  $(7/11)^8 \times (7/11)^3 = (7/11)^x$

b.  $(10/13)^8 \times (10/13)^5 \times (10/13)^2 = (10/13)^{3x}$

5. Verify law II for :

**13 - Exponents and Powers**

## Practice Worksheet

- a.  $4^3 \div 4^2 = 4$
- b.  $(-3)^4 \div (-3)^2 = 9$
- c.  $(-2/9)^8 \div (-2/9)^5 = (-8/729)$
6. Arrange the numbers  $512 \times 10^2$ ,  $0.478 \times 10^6$ ,  $0.0049 \times 10^7$  in increasing order.
7. Solve for  $x$  :  $(3/7)^4 \times (3/7)^x = (3/7)^8$