

**CLASS 7 A&B**  
**MATHS HHW (WINTER BREAK)2022-23**  
**WORKSHEET**  
**CHAPTER 13**  
**EXPONENT AND POWERS**

1. Fill in the blanks :

(a)  $\left(\frac{-2}{3}\right) \times \left(\frac{-2}{3}\right) \times \left(\frac{-2}{3}\right) \times \left(\frac{-2}{3}\right) = \left[ \dots\dots\dots \right]^4$

(b)  $(-3)^3 \times (-3)^4 = \dots\dots\dots$

2. Evaluate :

(a) Find the value of  $x$  :

$$\left(\frac{-7}{5}\right)^{11} \div \left(\frac{-7}{5}\right)^3 = \left(\frac{-7}{5}\right)^{2x+2}$$

(b) Find the value of  $a$  :

$$\left[\left(\frac{3}{13}\right)^8\right]^3 = \left(\frac{3}{13}\right)^{a+1}$$

3. Match of column :

Column 'A'	Column 'B'
(a) $x^m \times x^n$	(i) $x^{mn}$
(b) $x^m \div x^n$	(ii) 1
(c) $(x^m)^n$	(iii) $(xy)^n$
(d) $x^m \times y^n$	(iv) $x^{m-n}$ ( $m > n$ )
(e) $x^0$	(v) $x^{m+n}$

4. Write in the standard form :

- (a) The distance between Earth and Moon is 384,000 km.
- (b) Speed of light in vacuum is 300,000,000 m/s
- (c) 0.0034256

5. Find the value of  $x$  :

(a)  $5\left(\frac{2}{5}\right) = 5^x$       (b)  $(2^6 \div 2^{-3}) \times 2^{14} = 2^x$

12. Using the standard form, write number 73984 in expanded form.

6. Simplify :

(a)  $\frac{\left(\frac{4}{7}\right) \times \left(\frac{2}{3}\right)^2}{\frac{4}{9} \times \left(\frac{4}{7}\right)^3}$

(b)  $\frac{25 \times 5^2 \times t^8}{10^3 \times t^4}$

7. Simplify :

(a)  $(-3)^2 \times (-5)^2$

(b)  $\left[(-16)^6 \div (-16)^3\right] \times (-16)^{-3}$

8. Find the value of :

(a)  $2^\circ \times 3^\circ \times 4^\circ$

(b)  $3^\circ \times 5^\circ + 19^\circ$

(c)  $(7^\circ \div 3^\circ) \times (8^\circ - 5^\circ)$

(d)  $4^\circ \times 6^\circ + 100^\circ$

9. Fill in the blanks :

$$(-19)^{11} \div (-19)^{15} = \frac{1}{(-19)^\square}$$

10. Simplify and write the answer in scientific rotation :

(a)  $(5 \times 10^3) \times (3 \times 10^5)$

(b)  $\frac{4.5 \times 10^6}{0.9 \times 10^5}$

11. Find  $m$  for the following :

(a)  $\left(\frac{8}{9}\right)^5 \times \left(\frac{9}{4}\right)^5 = (2)^m$

(b)  $(7)^3 \div (2)^m = \left(\frac{7}{2}\right)^3$

### ACTIVITY: ROTATIONAL SYMMETRY

<https://www.youtube.com/watch?v=dipOGjzLCI4>

**PRACTICE THE CHAPTER:- RATIONAL NUMBER, PERIMETER AND AREA  
ALGEBRAIC EXPRESSION IN ROUGH COPY for annual exam**