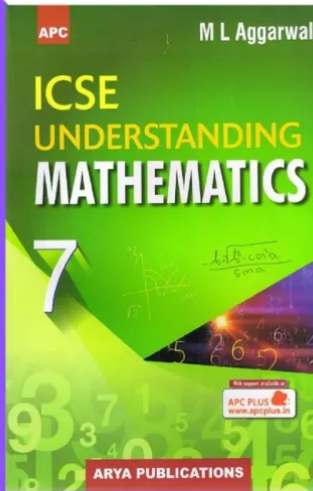


ML Aggarwal Solutions for Class 7 Maths

Chapter 4- Exponents and Powers



ML Agrawal Solutions

CLASS 7 MATHS

Chapter 4: Exponents and
Powers

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ML Aggarwal Solutions for Class 7 Maths

Chapter 4- Exponents and Powers

Class 7: Maths Chapter 4 solutions. Complete Class 7 Maths Chapter 4 Notes.

ML Aggarwal Solutions for Class 7 Maths Chapter 4- Exponents and Powers

ML Aggarwal 7th Maths Chapter 4, Class 7 Maths Chapter 4 solutions

1. Fill in the blanks:

(i) In the expression 3^7 , base = And exponent =

Solution:-

In the expression 3^7 , base = 3 and exponent = 7

(ii) In the expression $(-7)^5$, base = and exponent =

Solution:-

In the expression $(-7)^5$, base = -7 and exponent = 5

(iii) In the expression $(2/5)^{11}$ base = And exponent =

Solution:-

In the expression $(2/5)^{11}$, base = $2/5$ and exponent = 11

(iv) If base is 6 and exponent is 8, then exponential form = _____

Solution:-

If base is 6 and exponent is 8, then exponential form = 6^8

2. Find the value of the following:

(i) 2^6

Solution:-

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$$2^6 = 2 \times 2 \times 2 \times 2 \times 2 \times 2 = 64$$

(iii) 5^5

Solution:-

$$5^5 = 5 \times 5 \times 5 \times 5 \times 5 = 3125$$

(iii) $(-6)^4$

Solution:-

$$-6 \times -6 \times -6 \times -6 = 1296$$

(iv) $(2/3)^4$

Solution:-

$$(2/3) \times (2/3) \times (2/3) \times (2/3) = 16/81$$

(v) $(-2/3)^5$

Solution:-

$$(-2/3)^5 = (-2/3) \times (-2/3) \times (-2/3) \times (-2/3) \times (-2/3) = -32/729$$

(vi) $(-2)^9$

Solution:-

$$-2 \times -2 \times -2 \times -2 \times -2 \times -2 \times -2 \times -2 \times -2 = -512$$

3. Express the following in the exponential form:

(i) $6 \times 6 \times 6 \times 6 \times 6$

Solution:-

$$6 \times 6 \times 6 \times 6 \times 6 = 6^5$$

(ii) $t \times t \times t$

Solution:-

$$t \times t \times t = t^3$$

(iii) $2 \times 2 \times a \times a \times a \times a$

Solution:-

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$$2 \times 2 \times a \times a \times a \times a = 2^2 a^4$$

(iv) $a \times a \times a \times c \times c \times c \times c \times d$

Solution:-

$$a \times a \times a \times c \times c \times c \times c \times d = a^3 c^4 d$$

4. Simplify the following

(i) 7×10^3

Solution:-

Above question can be written as,

$$= 7 \times 10 \times 10 \times 10$$

$$= 7 \times 1000$$

$$= 7000$$

(ii) $2^5 \times 9$

Solution:-

Above question can be written as,

$$= 2 \times 2 \times 2 \times 2 \times 2 \times 9$$

$$= 32 \times 9$$

$$= 288$$

(iii) $3^3 \times 10^4$

Solution:-

Above question can be written as,

$$= 3 \times 3 \times 3 \times 10 \times 10 \times 10 \times 10$$

$$= 27 \times 10000$$

$$= 2,70,000$$

5. Simplify the following

(i) $(-3) \times (-2)^3$

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Solution:-

Above question can be written as,

$$= (-3) \times (-2) \times (-2) \times (-2)$$

$$= (-3) \times (-8)$$

$$= 24$$

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

Solution:-

Above question can be written as,

$$= (-3) \times (-3) \times (-5) \times (-5)$$

$$= 9 \times 25$$

$$= 225$$

(iii) $(-2)^3 \times (-10)^4$

Solution:-

Above question can be written as,

$$= (-2) \times (-2) \times (-2) \times (-10) \times (-10) \times (-10) \times (-10)$$

$$= -8 \times 10000$$

$$= -80000$$

(iv) $(-1)^9$

Solution:-

Above question can be written as,

$$= (-1) \times (-1) \times (-1) \times (-1) \times (-1) \times (-1) \times (-1) \times (-1) \times (-1)$$

$$= -1$$

(v) $25^2 \times (-1)^{31}$

Solution:-

Above question can be written as,

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$$= 25 \times 25 \times (-1)$$

$$= 625 \times (-1)$$

$$= -625$$

$$(vi) 4^2 \times 3^3 \times (-1)^{122}$$

Solution:-

Above question can be written as,

$$= 4 \times 4 \times 3 \times 3 \times 3 \times 1$$

$$= 16 \times 27 \times 1$$

$$= 432$$

6. Identify the greater number in each of the following:

$$(i) 4^3 \text{ or } 3^4$$

Solution:-

Above question can be written as,

$$4 \times 4 \times 4 = 64$$

$$3 \times 3 \times 3 \times 3 = 81$$

By comparing the two results,

3^4 is the greater number.

$$(ii) 7^3 \text{ or } 3^7$$

Solution:-

Above question can be written as,

$$7 \times 7 \times 7 = 343$$

$$3 \times 3 \times 3 \times 3 \times 3 \times 3 \times 3 = 2,187$$

By comparing the two results,

3^7 is the greater number.

$$(iii) 4^5 \text{ or } 5^4$$

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Solution:-

Above question can be written as,

$$4 \times 4 \times 4 \times 4 \times 4 = 1024$$

$$5 \times 5 \times 5 \times 5 = 625$$

By comparing the two results,

4^5 is the greater number.

(iv) 2^{10} or 10^2

Solution:-

Above question can be written as,

$$2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2 = 1024$$

$$10 \times 10 = 100$$

By comparing the two results,

2^{10} is the greater number.

7. Write the following numbers as power of 2:

(i) 8

Solution:-

8 can be write as power of 2,

$$\begin{array}{r|l} 2 & 8 \\ \hline 2 & 4 \\ \hline & 2 \end{array}$$

$$2 \times 2 \times 2 \times 2 = 2^4$$

(ii) 128

Solution:-

128 can be write as power of 2,

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$$\begin{array}{r|l}
 2 & 128 \\
 \hline
 2 & 64 \\
 \hline
 2 & 32 \\
 \hline
 2 & 16 \\
 \hline
 2 & 8 \\
 \hline
 2 & 4 \\
 \hline
 & 2
 \end{array}$$

$$2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2 = 2^7$$

(iii) 1024

Solution:-

1024 can be write as power of 2,

$$\begin{array}{r|l}
 2 & 1024 \\
 \hline
 2 & 512 \\
 \hline
 2 & 256 \\
 \hline
 2 & 128 \\
 \hline
 2 & 64 \\
 \hline
 2 & 32 \\
 \hline
 2 & 16 \\
 \hline
 2 & 8 \\
 \hline
 2 & 4 \\
 \hline
 & 2
 \end{array}$$

$$2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2 = 2^{10}$$



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- Chapter 2- Fractions and Decimals
- Chapter 3- Rational Numbers
- Chapter 4- Exponents and Powers
- Chapter 5- Sets
- Chapter 6- Ratio and Proportion
- Chapter 7- Percentage and Its Applications
- Chapter 8- Algebraic Expressions
- Chapter 9- Linear Equations and Inequalities
- Chapter 10- Lines and Angles
- Chapter 11- Triangles and its Properties
- Chapter 12- Congruence of Triangles
- Chapter 13- Practical Geometry
- Chapter 14- Symmetry
- Chapter 15- Visualising Solid Shapes
- Chapter 16- Perimeter and Area
- Chapter 17- Data Handling

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About ML Aggarwal

M. L. Aggarwal, is an Indian mechanical engineer, educator. His achievements include research in solutions of industrial problems related to fatigue design. Recipient Best Paper award, Manipal Institute of Technology, 2004. Member of TSTE.

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