



இயல் 7.3 இயற்கணிதம்

பயிற்சி எண் :: 7.3.4.1.C

இயற்கணிதம் (Algebra) - சுருக்குக - தநாஅபு - பயிற்சி 3.1.6-7

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6. பின்வரும் இணைகளில் பெரிய எண்ணைக் காண்க.

i) 6^3 அல்லது 3^6

$$6^3 = \underbrace{6 \times 6 \times 6}_1$$

$$= 36 \times 6 = 216$$

$$3^6 = \underbrace{3 \times 3}_1 \times \underbrace{3 \times 3}_1 \times \underbrace{3 \times 3}_1$$

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

$$= 81 \times 9 = 729$$

$$729 > 216 \Rightarrow 3^6 > 6^3$$

$\therefore 3^6$ என்பது பெரிய எண்ணாகும்.

$$\begin{array}{r} \textcircled{1} \quad \begin{array}{r} 36 \\ \times 6 \\ \hline 216 \end{array} \end{array}$$

$$\begin{array}{r} \textcircled{2} \quad \begin{array}{r} 81 \\ \times 9 \\ \hline 729 \end{array} \end{array}$$

ii) 5^3 அல்லது 3^5

$$5^3 = \underbrace{5 \times 5 \times 5}_1$$

$$= 25 \times 5 = 125$$

$$3^5 = \underbrace{3 \times 3}_1 \times \underbrace{3 \times 3}_1 \times 3$$

$$= 9 \times 9 \times 3$$

$$= 81 \times 3 = 243$$

$$243 > 125 \Rightarrow 3^5 > 5^3$$

$\therefore 3^5$ என்பது பெரிய எண்ணாகும்.

$$\begin{array}{r} \textcircled{1} \quad \begin{array}{r} 25 \\ \times 5 \\ \hline 125 \end{array} \end{array}$$

$$\begin{array}{r} \textcircled{2} \quad \begin{array}{r} 81 \\ \times 3 \\ \hline 243 \end{array} \end{array}$$

iii) 2^8 அல்லது 8^2

$$2^8 = \underbrace{2 \times 2}_1 \times \underbrace{2 \times 2}_1 \times \underbrace{2 \times 2}_1 \times \underbrace{2 \times 2}_1$$

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

$$= 16 \times 16 = 256$$

$$8^2 = \underbrace{8 \times 8}_2 = 64$$

$$256 > 64 \Rightarrow 2^8 > 8^2$$

$\therefore 2^8$ என்பது பெரிய எண்ணாகும்.

$$\begin{array}{r} \textcircled{1} \quad \begin{array}{r} 16 \\ \times 16 \\ \hline 96 \\ 16 \\ \hline 256 \end{array} \end{array}$$

$$\begin{array}{r} \textcircled{2} \quad \begin{array}{r} 8 \\ \times 8 \\ \hline 64 \end{array} \end{array}$$

7. பின்வருவனவற்றைச் சுருக்குக.

i) $7^2 \times 3^4$

$$7^2 \times 3^4 = \underbrace{7 \times 7}_1 \times \underbrace{3 \times 3}_1 \times \underbrace{3 \times 3}_1$$

$$= 49 \times 9 \times 9$$

$$= 49 \times 81 = 3,969$$

$$\therefore 7^2 \times 3^4 = 3,969$$

$$\begin{array}{r} \textcircled{1} \quad \begin{array}{r} 49 \\ \times 81 \\ \hline 49 \\ 392 \\ \hline 3969 \end{array} \end{array}$$

ii) $3^2 \times 2^4$

$$3^2 \times 2^4 = \underbrace{3 \times 3}_1 \times \underbrace{2 \times 2}_1 \times \underbrace{2 \times 2}_1$$

$$= 9 \times 4 \times 4$$

$$= 36 \times 4 = 144$$

$$\therefore 3^2 \times 2^4 = 144$$

$$\begin{array}{r} \textcircled{1} \quad \begin{array}{r} 36 \\ \times 4 \\ \hline 144 \end{array} \end{array}$$

iii) $5^2 \times 10^4$

$$5^2 \times 10^4 = \underbrace{5 \times 5}_1 \times \underbrace{10 \times 10}_1 \times \underbrace{10 \times 10}_1$$

$$= 25 \times 100 \times 100$$

$$= 25 \times 10,000 = 2,50,000$$

$$\begin{array}{r} \textcircled{1} \quad \begin{array}{r} 100 \\ \times 100 \\ \hline 10000 \\ 100000 \\ \hline 250000 \end{array} \end{array}$$

$$\begin{array}{r} \textcircled{2} \quad \begin{array}{r} 25 \\ \times 10000 \\ \hline 250000 \end{array} \end{array}$$

$$\therefore 5^2 \times 10^4 = 2,50,000$$

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