

EXERCISE 6.4

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1. Write the following numbers in the expanded exponential forms:

(i) 20068

(ii) 420719

(iii) 7805192

(iv) 5004132

(v) 927303

Solution:

(i) Given 20068

$$20068 = 2 \times 10^4 + 0 \times 10^3 + 0 \times 10^2 + 6 \times 10^1 + 8 \times 10^0$$

(ii) Given 420719

$$420719 = 4 \times 10^5 + 2 \times 10^4 + 0 \times 10^3 + 7 \times 10^2 + 1 \times 10^1 + 9 \times 10^0$$

(iii) Given 7805192

$$7805192 = 7 \times 10^6 + 8 \times 10^5 + 0 \times 10^4 + 5 \times 10^3 + 1 \times 10^2 + 9 \times 10^1 + 2 \times 10^0$$

(iv) Given 5004132

$$5004132 = 5 \times 10^6 + 0 \times 10^5 + 0 \times 10^4 + 4 \times 10^3 + 1 \times 10^2 + 3 \times 10^1 + 2 \times 10^0$$

(v) Given 927303

$$927303 = 9 \times 10^5 + 2 \times 10^4 + 7 \times 10^3 + 3 \times 10^2 + 0 \times 10^1 + 3 \times 10^0$$

2. Find the number from each of the following expanded forms:

(i) $7 \times 10^4 + 6 \times 10^3 + 0 \times 10^2 + 4 \times 10^1 + 5 \times 10^0$

(ii) $5 \times 10^5 + 4 \times 10^4 + 2 \times 10^3 + 3 \times 10^0$

(iii) $9 \times 10^5 + 5 \times 10^2 + 3 \times 10^1$

(iv) $3 \times 10^4 + 4 \times 10^2 + 5 \times 10^0$

Solution:

(i) Given $7 \times 10^4 + 6 \times 10^3 + 0 \times 10^2 + 4 \times 10^1 + 5 \times 10^0$

$$= 7 \times 10000 + 6 \times 1000 + 0 \times 100 + 4 \times 10 + 5 \times 1$$

$$= 70000 + 6000 + 0 + 40 + 5$$

$$= 76045$$

(ii) Given $5 \times 10^5 + 4 \times 10^4 + 2 \times 10^3 + 3 \times 10^0$
 $= 5 \times 100000 + 4 \times 10000 + 2 \times 1000 + 3 \times 1$
 $= 500000 + 40000 + 2000 + 3$
 $= 542003$

(iii) Given $9 \times 10^5 + 5 \times 10^2 + 3 \times 10^1$
 $= 9 \times 100000 + 5 \times 100 + 3 \times 10$
 $= 900000 + 500 + 30$
 $= 900530$

(iv) Given $3 \times 10^4 + 4 \times 10^2 + 5 \times 10^0$
 $= 3 \times 10000 + 4 \times 100 + 5 \times 1$
 $= 30000 + 400 + 5$
 $= 30405$



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