

Express (4237.10) decimal number as Binary, octal, hexadecimal & base 5

Assignment 1 unit-1

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Q.1 Express (4237.10) into as Binary, octal, hexadecimal & base 5.

→ given number in decimal format.  
(4237.10)<sub>10</sub>

i) conversion into binary.  
(4237.10)<sub>10</sub> → (P)<sub>2</sub>

2	4237	
2	2118 - 1	
2	1059 - 0	
2	529 - 1	
2	264 - 0	
2	132 - 0	
2	66 - 0	
2	33 - 0	
2	16 - 0	
2	8 - 0	
2	4 - 0	
2	2 - 0	
	1 - 0	

1000010001101.000110011...

0.10	
x 2	
0.20	
x 2	
0.40	
x 2	
0.80	
x 2	
1.60	
x 2	
1.20	
x 2	
0.40	
x 2	
0.80	
x 2	
1.60	
x 2	
1.20	

2) conversion into octal

$$(4237.10)_{10} \longrightarrow (P)_8$$

8	4237	
8	529 - 5	0.10
8	66 - 1	x 8
8	8 - 2	0.80
8	1 - 0	x 8
		6.40
		x 8

$$10215.063146314 \dots$$

$$\times 8$$

$$1.60$$

$$\times 8$$

$$4.80$$

$$\times 8$$

$$6.40$$

$$\times 8$$

$$3.20$$

$$\times 8$$

$$1.60$$

conversion of decimal (4237.10)

into octal is

$$10215.063146314 \dots$$

$$\times 8$$

$$4.80$$

After 6314... some sequence follow infinitely.

8) conversion into hexadecimal

$$(4237.10)_{10} \longrightarrow ( \quad ? \quad )_{16}$$

16	4237		0.10
16	264 - (19) = D		x 16
16	16 - 8		<u>1.60</u>
	1 - 0		x 16
			<u>9.60</u>
			x 16
			<u>9.60</u>
			x 16
			<u>9.60</u>

infinitely '9' we get so

we can convert this one

nine as carry digit before

of this 9.. so we will

get (10) → (A).

conversion of decimal into hexadecimal  
of  $(4237.10)_{10} \longrightarrow (108D.19999A)_{16}$

4) conversion into base 5

$$(4237.10)_{10} \rightarrow (P)_5$$

5	4237	
5	847 - 2	
5	169 - 2	0.10
5	33 - 4	x 5
5	6 - 3	②.50
	12 - 1	x 5
		②.50
		x 5
		②.50
		x 5
		②.50

$$113422.02222..._5$$

conversion into base 5 of decimal is

$$(4237.10)_{10} \rightarrow (113422.02222...)_5$$