1- Convert number (24) from decimal to binary

حول رقم (24) من decimal إلى binary

Solution

Divide by th	Divide by the base 2 to get the digits from the remainders:				
Division by 2	Quotient	Remainder (Digit)	Bit #		
(24)/2	12	0	0		
(12)/2	6	0	1		
(6)/2	3	0	2		
(3)/2	1	1	3		
(1)/2	0	1	4		
= (11000) ₂					

2- Convert the number (30) from decimal to binary

Solution

Divide by th	ne base 2 to	get the digits	from the rema	inders:
Division by 2	Quotient	Remainder (Digit)	Bit #	
(30)/2	15	0	0	
(15)/2	7	1	1	
(7)/2	3	1	2	
(3)/2	1	1	3	
(1)/2	0	1	4	
= (11110) ₂				

3- Convert the number (12) from decimal to binary

حول رقم (12) من decimal إلى binary

Solution

Divide by th	ne base 2 to	get the digits	from the	e remainders:
Division by 2	Quotient	Remainder (Digit)	Bit #	
(12)/2	6	0	0	
(6)/2	3	0	1	
(3)/2	1	1	2	
(1)/2	0	1	3	
= (1100) ₂				

4- Convert number (24) from decimal to octal

حول رقم (24) من decimal إلى octal

Divide by the base 8 to get the digits from the remainders:					
Division by 8	Quotient	Remainder (Digit)	Digit #		
(24)/8	3	0	0		
(3)/8	0	3	1		
= (30) ₈			-		

5- Convert the number (30) from decimal to octal

حول رقم (30) من decimal إلى

Solution

Divide by the	base 8 to get t	he digits from the	remainders:
Division by 8	Quotient	Remainder (Digit)	Digit #
(30)/8	3	6	0
(3)/8	0	3	1
= (36) ₈			

6- Convert the number (12) from decimal to octal

حول رقم (12) من decimal إلى

Divide by the	base 8 to get tl	he digits from the re	emainders:
Division by 8	Quotient	Remainder (Digit)	Digit #
(12)/8	1	4	0
(1)/8	0	1	1
= (14) ₈			-

7- Convert the number (24) from decimal to hexadecimal

حول رقم (24) من decimal إلى hexadecimal

Solution

Divide by the base 16 to get the digits from the remainders:					
Division by 16	Quotient	Remainder (Digit)	Digit #		
(24)/16	1	8	0		
(1)/16	0	1	1		
= (18) ₁₆					

8- Convert the number (30) from decimal to hexadecimal

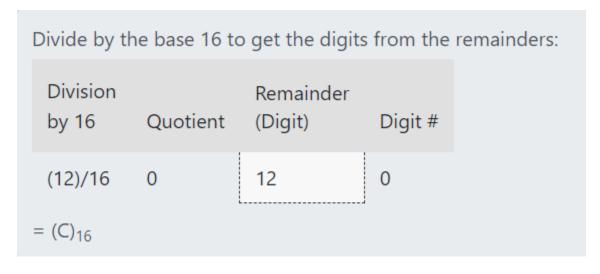
حول رقم (30) من decimal إلى hexadecimal

Solution

Divide by th	ne base 16 to	get the digits	s from the	remainders:
Division by 16	Quotient	Remainder (Digit)	Digit #	
(30)/16	1	14	0	
(1)/16	0	1	1	
= (1E) ₁₆			-	

9- Convert the number (12) from decimal to hexadecimal

حول رقم (12) من decimal إلى hexadecimal



10- Convert the number (123789) from decimal to hexadecimal

تحويل الرقم (123789) من decimal الى النظام hexadecimal

Divide by the ba	ase 16 to get	t the digits fro	m the rem	ainders:
Division by 16	Quotient	Remainder (Digit)	Digit #	
(123789)/16	7736	13	0	
(7736)/16	483	8	1	
(483)/16	30	3	2	
(30)/16	1	14	3	
(1)/16	0	1	4	
= (1E38D) ₁₆				