



INFORMATION TECHNOLOGY LITERACY

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IT 1 - Y



QUIZ

Answer with solution

1) $8_{10} + 2_{10}$ (Convert to binary then add)

2) $10_{10} - 6_{10}$ (Convert to binary then subtract)

3) $00010111 * 00000011$

4) $110 / 11100110$

1) $8_{10} + 2_{10}$ (Convert to binary then add)

a. Convert 8_{10} to binary

8	4	2	1
1	0	0	0

b. Convert 2_{10} to binary

8	4	2	1
0	0	1	0

c. Then add

	1	0	0	0
+	0	0	1	0
	1	0	1	0

Answer: 1 0 1 0

2) $10_{10} - 6_{10}$ (Convert to binary then subtract)

a. Convert 10_{10} to binary

8	4	2	1
1	0	1	0

b. Convert 6_{10} to binary

4	2	1
1	1	0

★ Reverse zeroes and ones

★ Then add 1

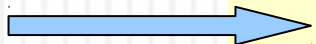


0	0	1
+		1
0	1	0

c. Now add 1010 with 010

1	0	1	0
+	0	1	0
1	1	0	0

★ Ignore left most digit



Answer: 100

3) 00010111 * 00000011

	0	0	0	1	0	1	1	1	
*	0	0	0	0	0	0	1	1	
				1	1	1	1	1	
	0	0	0	1	0	1	1	1	
+	0	0	0	1	0	1	1	1	
	0	0	1	0	0	0	1	0	1

Answer: 1000101

4) 110 / 11100110

Answer: 100110 r. 10

Diagram illustrating the addition of two 6-bit numbers using a ripple-carry adder. The inputs are 110 and 100110. The diagram shows the propagation of carry bits from right to left, with arrows indicating the direction of the carry. The final result is 1010110.

	1	0	0	1	1	0
110	1	1	1	0	0	1
- 110						
10						
- 0						
100						
- 0						
1001						
- 110						
111						
- 110						
10						
- 0						
1010110						