

10.Full adder;

Program:

```
#include <stdio.h>

typedef char bit;

bit Cout=0;

bit fulladd(bit A ,bit B,bit Cin){
    Cout=(A&B) || (Cin&(A^B));
    return (A^B)^Cin;
}

int main()
{
    int i,j,k;
    int result;
    printf("A  B  Cin  | S Cout\n");
    for(i=0;i<2;i++)
    {
        for(j=0;j<2;j++)
        {
            for(k=0;k<2;k++)
            {
                result=fulladd(i,j,k);
                printf("%d  %d  %d  | ",i,j,k);
                printf("%d  %d\n",result,Cout);
            }
        }
    }

    return 0;
}
```

Output:

```
28 0j
✓ ↗ ↘
A  B  Cin | S  Cout
0  0  0   | 0   0
0  0  1   | 1   0
0  1  0   | 1   0
0  1  1   | 0   1
1  0  0   | 1   0
1  0  1   | 0   1
1  1  0   | 0   1
1  1  1   | 1   1

...Program finished with exit code 0
Press ENTER to exit console.
```