

$$m(x) = 11010011101$$

$$G(x) = \begin{pmatrix} 1 & 0 & 1 \\ 0 & 1 & 1 \end{pmatrix}$$

Need to add 3 zeros

$$\begin{array}{r} 1111000116 \\ \hline 1011 \mid 11010011101000 \end{array}$$

1011 ↓ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |

1100

1011 ↓

1110

1011 ↓

1011

1011 ↓

0001

0600↓

0011

0500 ✓

0111

0000

1110

1011 ✓

1011

1011↓

0006

0000

0000

5000

5000

0666

006

$$R(x) = 000$$

Transmitted bit

String

$$= ||0|00||1|1|0|000$$

②

$$M(x) = 10110011101$$

$$G(x) = 1001$$

	10100111	
1001	10110011101	
1001	↓	
0100		
0000	✓	
1000		
1001	✓	
0011		
0000	✓	
0111		
0000	✓	
1111		
1001	✓	
1100		
1001	✓	
1011		
1001		
010		

∴ Remainder is 010.

So there is an error on the message. Error detected.