

1a) 100 b2

→ 1100100

1b) 100 b3

10201

81 27 9 3 1

81 + 18  
99

1e) 100 b6

244

36 6 1

1i) 100 b10

100

1f) 100 b7

202

1j) 100 b11

91

11 1

1c) 100 b4

1210

64 16 4 1

64 + 32

1g) 100 b8

144

64 8 1

1k) 100 b12

84

12 1

1d) 100 b5

400

25 5 1

1h) 100 b9

121

81 9 1

2) 101 · 97

$$101 = 100 + 1 = 1 \cdot 10^2 + 0 \cdot 10^1 + 1 \cdot 10^0 = (1, 0, 1)$$

$$97 = 100 - 3 = 1 \cdot 10^2 + 0 \cdot 10^1 - 3 \cdot 10^0 = (1, 0, -3)$$

1	0	1
1	0	-3
-3	0	-3
0	0	0

$$\begin{array}{r}
 1 \quad 0 \quad 1 \\
 \hline
 1 \quad 0 \quad -2 \quad 0 \quad -3 \\
 9 \quad 8 \quad 0 \quad -3 \\
 9 \quad 7 \quad 9 \quad 7
 \end{array}$$

3)  $26_{10} \times 80_{10}$

$26_{10} \rightarrow 222_3$   
           9 3 1

$80_{10} \rightarrow 2222_3$   
           27 9 3 1

$$\begin{array}{r}
 2 \quad 2 \quad 2 \quad 2 \quad 80 \\
 2 \quad 2 \quad 2 \quad 26 \\
 \hline
 1 \quad 0 \quad 0 \quad 0 \quad -1 \quad 80 \\
 1 \quad 0 \quad 0 \quad -1 \quad 26 \\
 \hline
 -1 \quad 0 \quad 0 \quad 0 \quad 1 \\
 0 \\
 0
 \end{array}$$

$$\begin{array}{r}
 1 \quad 0 \quad 0 \quad 0 \quad -1 \\
 \hline
 1 \quad 0 \quad 0 \quad -1 \quad -1 \quad 0 \quad 0 \quad 1 \\
 0 \quad 2 \quad 2 \quad 1 \quad 2 \quad 0 \quad 0 \quad 1
 \end{array}$$

- 4)
- |        |          |          |          |          |          |
|--------|----------|----------|----------|----------|----------|
| 1 = 1  | 6 = 20   | 11 = 102 | 16 = 121 | 21 = 210 |          |
| 2 = 2  | 7 = 21   | 12 = 110 | 17 = 122 | 22 = 211 | 26 = 222 |
| 3 = 10 | 8 = 22   | 13 = 111 | 18 = 200 | 23 = 212 |          |
| 4 = 11 | 9 = 100  | 14 = 112 | 19 = 201 | 24 = 220 |          |
| 5 = 12 | 10 = 101 | 15 = 120 | 20 = 202 | 25 = 221 |          |

1 4 7 10

13 16 19

22 25

2 5 8 11 14

17 20 23 26

3 4 5 12

13 14 21

22 23

6 7 8 15 16

17 24 25 26

9 10 11 12

13 14 15 16

17

18 19 20

21 22 23

24 25 26