

$$2. A \cup B = \{1, 2, 3, 4, 6\} - (A \cap B) = \{2\} \\ = \{1, 3, 4, 6\}$$

$$4. \begin{array}{r} 0110 \\ \oplus 1011 \\ \hline 1101 \end{array}$$

$$11. \begin{array}{r} 0101 \\ 0011 \\ \hline 0001 \end{array}$$

$$6. 27_5 = x_{10} \quad \begin{array}{r} 2 \quad 4 \\ 5 \quad 1 \\ \hline 10 + 4 = 14_{10} \end{array}$$

$$14_{10} = x_7 \quad \begin{array}{l|l} Q & R \\ 7/14 & 2 \quad 0 \end{array}$$

$$8. \begin{array}{r} 45_{16} \\ 4 \quad 5 \\ 16 \quad 1 \\ \hline 64 + 5 = 69 \end{array}$$

$$\begin{array}{r} 0100 + 0101 \\ 64 \quad 32 \quad 16 \quad 8 \quad 4 \quad 2 \quad 1 \\ 1001 = 9 \\ 64 + 4 + 1 = 69 \end{array}$$

$$\begin{array}{r} 10100111 \\ 128 \quad 64 \quad 32 \quad 16 \quad 8 \quad 4 \quad 2 \quad 1 \\ 128 + 4 + 2 + 1 \\ = 135 \end{array}$$

$$C5 = 11000101 \\ 128 \quad 64 \quad 32 \quad 16 \quad 8 \quad 4 \quad 2 \quad 1 \\ 128 + 64 + 4 + 1 \\ = 197$$

$$\begin{array}{r} 1111 \quad 1111 \\ 128 \quad 64 \quad 32 \quad 16 \quad 8 \quad 4 \quad 2 \quad 1 \end{array}$$

$$14. A2C \rightarrow CID \rightarrow D1E \rightarrow E3F = 16$$

$$16. \begin{bmatrix} 4 & 2 \\ 1 & 7 \end{bmatrix} \cdot \begin{bmatrix} 6 & 2 \\ 3 & 0 \end{bmatrix} = \begin{bmatrix} 4 \times 6 + 2 \times 3 & 4 \times 2 + 2 \times 0 \\ 1 \times 6 + 7 \times 3 & 1 \times 2 + 7 \times 0 \end{bmatrix} \\ = \begin{bmatrix} 24 + 6 & 8 + 0 \\ 6 + 21 & 2 + 0 \end{bmatrix} \\ = \begin{bmatrix} 30 & 8 \\ 27 & 2 \end{bmatrix}$$

18. $f(x) \rightarrow x^2 + 1$
 $= (-2 \times -2) + 1$
 5, 2, 1,

20. $3 \times \begin{bmatrix} 4 & 2 \\ 1 & 7 \end{bmatrix} = \begin{bmatrix} 3 \times 4 & 3 \times 2 \\ 3 \times 1 & 3 \times 7 \end{bmatrix} = \begin{bmatrix} 12 & 6 \\ 3 & 21 \end{bmatrix}$

26. $0 \ 1 \ 1 \ 0 \ 1 \ 0 \ 1 \ 1$
 $64 \ 32 \ 16 \ 8 \ 4 \ 2 \ 1$
 $64 + 32 + 8 + 2 + 1$
 $= 107$

28. $A \cup B = \{1, 2, 3, 4, 6\} - B \{2, 4, 6\}$
 $= 1, 3,$

29. $257_{10} = x_2$

	Q	R	
257/2	128	1	1 0 0 0 0 0 0
128/2	64	0	1 0 0 0 0 0 0
64/2	32	0	0 0 0 0 0 0 0
32/2	16	0	1 0 1 0 0 0 0 0
16/2	8	0	256 128 64 32 16 8 4 2 1
8/2	4	0	256 + 64
4/2	2	0	
2/2	1	0	
65/2	32	1	
32/2	16	0	
16/2	8	0	
8/2	4	0	
4/2	2	0	
2/2	1	0	

32.

$$\begin{array}{r} 1000 \\ 1 \overline{) 1000} \\ \underline{1000} \end{array} = 8$$

$$\begin{array}{r} 16/2 \\ 8/2 \\ 4/2 \\ 2/2 \end{array}$$

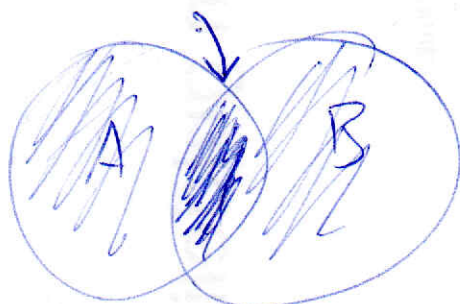
$$\begin{array}{r} 8 \\ 4 \\ 2 \\ 1 \end{array} \begin{array}{l} \cancel{0} \\ 0 \\ 0 \\ 0 \end{array}$$

33.

$$\begin{bmatrix} 4 & 2 \\ 1 & 7 \end{bmatrix} - \begin{bmatrix} 6 & 2 \\ 3 & 0 \end{bmatrix} = \begin{bmatrix} -2 & 0 \\ -2 & 7 \end{bmatrix}$$

1. $A \oplus B$ = only A & B elements with no intersection

2. Apply B & A as a set.



	Q	R	
257	128	1	1 0000 0001
128	64	0	0 0100 0001
64	32	0	1 0100 0000
32	16	0	256 128 64 32 16 8 4 2 1
16	8	0	
8	4	0	
4	2	0	
2	1	0	

	Q	R
65	32	+
32	16	0
16	8	0
8	4	0
4	2	0
2	1	0

$$A+B = (1, 2, 3, 4, 6)$$

$$21. A \cap B.$$

$$1, 2, 3$$

$$2, 4, 6$$

$$A-B = 1, 3$$

for person in people:

for product in person product:

if person height ≤ 165

A7.

$$\begin{array}{r} 10100111 \\ 128 \ 64 \ 32 \ 16 \ 8 \ 4 \ 2 \ 1 \end{array}$$

$$128 + 32 + 4 + 2 + 1 = 167$$

Dillon Carter
*14582

5

Dillon Co. #
#14582

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