

Exercises

B-2

| N | Answer |
|---|----------------------|
| 1 | C_{12}^8 |
| 2 | C_{12}^{11} 180 |
| 3 | 477 |

N1.

$\underbrace{0 \dots 0}_{12}$

12

8 elements

Answer: C_{12}^8

N2

$$x_1 + x_2 + \dots + x_{45} = 100, x_i \geq 1$$

$$y_i \geq 1$$

$$y_i = x_i + 1$$

$$y_1 + y_2 + \dots + y_{45} = 100 + 90 = 190$$

Answer: C_{189}^{14}

N3

Answer: 510

$\{10\} \cup \{49\}$

$\{7\} = 209$

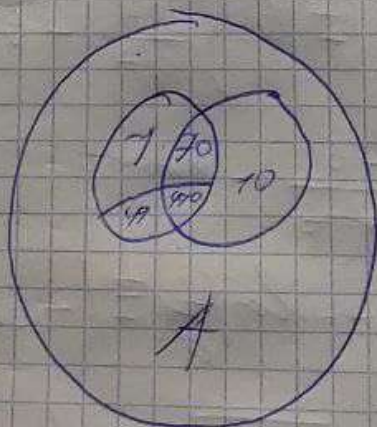
$\{10\} = 76$

$\{49\} = 49$

$\{90\} = 75$

$\{490\} = 43$

$\{A\} = 510$



$$\{10\} \cup \{49\} = \{A\} - \{10\} + \{490\} =$$
$$= 510 - 76 + 43 = 477$$

Answer: 477

Exercise 6

| N | Ombenb |
|---|-------------------|
| 3 | 128115 |
| 4 | 2996 |
| 6 | 5762714 |
| 8 | $\frac{143}{171}$ |

My

$$A = \{a, b, c\}$$

$$N = abbaccabb$$

$$a = 0$$

$$b = 1$$

$$c = 2$$

$$11002221_3 = 3^7 + 3^6 + 2 \cdot 3^5 + 2 \cdot 3^4 + 6 + 1 =$$

$$= 2995_{10}$$

$$N = 2995 + 1 = 2996$$

Nb

$$(1; 2; 3; 4; 5; 6; 7)$$

~~$$3585$$~~

$$3585 - 1 = 3584$$

~~$$3584$$~~

$$3584 = 1792 \cdot 2 + 0$$

$$1792 = 597 \cdot 3 + 1$$

$$597 = 149 \cdot 4 + 1$$

$$149 = 29 \cdot 5 + 4$$

$$29 = 4 \cdot 6 + 5$$

$$4 = 0 \cdot 7 + 4$$

| | | |
|---|---------|---|
| 4 | 7654321 | 5 |
| 5 | 764321 | 7 |
| 4 | 64321 | 6 |
| 1 | 4321 | 2 |
| 1 | 43 | 3 |
| 0 | 41 | 1 |
| 0 | 4 | 4 |

Orbiter: 5762314

N 8

$$1 - \frac{8}{19} \cdot \frac{7}{18} = \frac{143}{171}$$

N 3

$$13 \cdot 14^4 - 13^5 = 128115$$