

Множества. Операции. Мощность.

Универсальное множество состоит из 26 строчных букв латинского алфавита.
Заданы множества A , B , C и D . Вычислить мощность множеств X и Y .

Задача 4.1.

12

$$\begin{aligned}A &= \{b, g, m, p, x\}, \\B &= \{b, i, j, l, t\}, \\C &= \{h, i\}, \\D &= \{a, f, i, o, p, q, u, v\}. \\X &= (A \cap B) \cup (D \cap C), \\Y &= (\overline{A} \cap D) \cup (C \setminus B).\end{aligned}$$

Задача 4.2.

12

$$\begin{aligned}A &= \{c, i, k, o, u\}, \\B &= \{f, g, k, r, u\}, \\C &= \{b, c, x, y, z\}, \\D &= \{b, f, h, y, z\}. \\X &= (A \cap B) \cup C, \\Y &= (A \cap \overline{B}) \cup (C \setminus D).\end{aligned}$$

Задача 4.3.

12

$$\begin{aligned}A &= \{g, h, o\}, \\B &= \{g, h, o, q\}, \\C &= \{g, h, v\}, \\D &= \{g, n, u, v, z\}. \\X &= (A \cap C) \cup B, \\Y &= (A \cap \overline{B}) \cup (C \setminus D).\end{aligned}$$

Задача 4.4.

12

$$\begin{aligned}A &= \{a, m, o, r\}, \\B &= \{e, f, o, y, z\}, \\C &= \{m, n\}, \\D &= \{e, l, q\}. \\X &= (A \setminus B) \cap (\overline{C} \cap D), \\Y &= (\overline{A} \cap \overline{B}) \setminus (C \cup D).\end{aligned}$$

Задача 4.5.

12

$$\begin{aligned}A &= \{b, c, h, n\}, \\B &= \{b, e, f, g, l, w\}, \\C &= \{a, b, k, l, p\}, \\D &= \{a, f, g, p, q, u, v\}. \\X &= (A \cap B) \cup C, \\Y &= (A \cap \overline{B}) \cup (C \setminus D).\end{aligned}$$

Задача 4.6.

12

$$\begin{aligned}A &= \{a, l, m, s, u\}, \\B &= \{h, i, m, w, y\}, \\C &= \{m, n\}, \\D &= \{h, l, t\}. \\X &= (A \setminus C) \cap \overline{B}, \\Y &= (\overline{A} \cap \overline{B}) \setminus (C \cup D).\end{aligned}$$

Задача 4.7.

12

$$\begin{aligned}A &= \{b, j, k, l, t\}, \\B &= \{j, k, u, v\}, \\C &= \{k, l\}, \\D &= \{a, i, j, s, y, z\}. \\X &= (A \cap C) \cup (D \cap B), \\Y &= (\overline{A} \cap D) \cup (C \setminus B).\end{aligned}$$

Задача 4.8.

12

$$\begin{aligned}A &= \{c, g, h, m, q\}, \\B &= \{a, b, m, o, w\}, \\C &= \{i, j, p, x, z\}, \\D &= \{a, b, f, g\}. \\X &= (A \cup B) \cap D, \\Y &= (A \setminus D) \cup (\overline{C} \setminus \overline{B}).\end{aligned}$$

Задача 4.9.

12

$$\begin{aligned}A &= \{e, k, n, o, q\}, \\B &= \{a, b, e, o, y\}, \\C &= \{m, n, z\}, \\D &= \{a, m, n, s, t, x, y\}. \\X &= (A \cup B) \cap D, \\Y &= (A \cap \overline{B}) \cup (C \setminus D).\end{aligned}$$

Задача 4.10.

12

$$\begin{aligned}A &= \{a, h, k, l, n, v\}, \\B &= \{c, d, h, r, w\}, \\C &= \{k, l, z\}, \\D &= \{c, j, m, v, w\}. \\X &= (A \cup B) \cap C, \\Y &= (\overline{A} \cap \overline{B}) \setminus (C \cup D).\end{aligned}$$

Задача 4.11.

12

$$\begin{aligned}A &= \{a, e, h, j, l, n\}, \\B &= \{g, h, o, r\}, \\C &= \{e, f, s, v, x, y\}, \\D &= \{d, g, k, v, w\}. \\X &= (A \cap C) \cup B, \\Y &= (\overline{A} \cap \overline{B}) \setminus (C \cup D).\end{aligned}$$

Задача 4.12.

12

$$\begin{aligned}A &= \{e, k, o, p, u\}, \\B &= \{a, b, k, t, u, y\}, \\C &= \{n, o, u\}, \\D &= \{a, n, o, y, z\}. \\X &= (A \cup B) \cap D, \\Y &= (A \cap \overline{B}) \cup (C \setminus D).\end{aligned}$$

Задача 4.13.

12

$$\begin{aligned}A &= \{e, g, j, l\}, \\B &= \{e, f, g, q\}, \\C &= \{d, e, q, v, z\}, \\D &= \{d, e, i, u, v, z\}. \\X &= (A \setminus B) \cap (\overline{C} \cap D), \\Y &= (A \cap \overline{B}) \cup (C \setminus D).\end{aligned}$$

Задача 4.14.

12

$$\begin{aligned}A &= \{a, c, e, m, n, p\}, \\B &= \{h, j, k, n, x, y\}, \\C &= \{c, d, o, p, r, s\}, \\D &= \{b, j, l\}. \\X &= (A \cap C) \cup (D \cap B), \\Y &= (\overline{A} \cap \overline{B}) \setminus (C \cup D).\end{aligned}$$

Задача 4.15.

12

$$\begin{aligned}A &= \{b, g, l, n, s, z\}, \\B &= \{g, h, n, s, x\}, \\C &= \{m, n, z\}, \\D &= \{a, g, k, r\}. \\X &= (A \cap C) \cup B, \\Y &= (\overline{A} \cap D) \cup (C \setminus B).\end{aligned}$$

Задача 4.16.

12

$$\begin{aligned}A &= \{a, d, e, g, h, s\}, \\B &= \{a, b, g, l, q\}, \\C &= \{d, e, m, t, u, w\}, \\D &= \{a, c, d, u, v, z\}. \\X &= (A \cup B) \cap D, \\Y &= (\overline{A} \cap \overline{B}) \setminus (C \cup D).\end{aligned}$$

Задача 4.17.

12

$$\begin{aligned}A &= \{a, c, d, i, j, m\}, \\B &= \{c, d, i, k, s\}, \\C &= \{c, d, n, p, q\}, \\D &= \{b, c, w, x\}. \\X &= (A \cup B) \cap C, \\Y &= (A \setminus D) \cup (\overline{C} \setminus \overline{B}).\end{aligned}$$

Задача 4.18.

12

$$\begin{aligned}A &= \{b, d, j, k, m\}, \\B &= \{b, c, d, n, u\}, \\C &= \{l, m, w\}, \\D &= \{a, b, j, l, r, s, w, x\}. \\X &= (A \cup D) \cap C, \\Y &= (\overline{A} \cap D) \cup (C \setminus B).\end{aligned}$$

Задача 4.19. 12

$A = \{c, d, i, j\},$
 $B = \{d, e, f, n\},$
 $C = \{f, g, s, v, w\},$
 $D = \{b, c, e, h, r, s, w, x\}.$
 $X = (A \setminus B) \cap (\overline{C} \cap D),$
 $Y = (A \setminus D) \cup (\overline{C} \setminus \overline{B}).$

Задача 4.22. 12

$A = \{a, b, k, m, n, x\},$
 $B = \{j, k, m, o, w\},$
 $C = \{b, c, t, u, y\},$
 $D = \{a, j\}.$
 $X = (A \cap C) \cup (D \cap B),$
 $Y = (\overline{A} \cap D) \cup (C \setminus B).$

Задача 4.25. 12

$A = \{a, c, k, p\},$
 $B = \{a, e, f, k, v\},$
 $C = \{m, n\},$
 $D = \{b, e, j, o, p, t, u\}.$
 $X = (A \setminus B) \cap (\overline{C} \cap D),$
 $Y = (A \setminus D) \cup (\overline{C} \setminus \overline{B}).$

Задача 4.28. 12

$A = \{a, j, l, n, t, x\},$
 $B = \{f, g, j, t, z\},$
 $C = \{n, o\},$
 $D = \{f, m, s, x, y\}.$
 $X = (A \cap B) \cup C,$
 $Y = (\overline{A} \cap \overline{B}) \setminus (C \cup D).$

Задача 4.31. 12

$A = \{c, f, h, k, l\},$
 $B = \{a, b, h, n, r, w\},$
 $C = \{m, n, o, q\},$
 $D = \{a, b, j, k, v, w\}.$
 $X = (A \cup B) \cap D,$
 $Y = (A \setminus D) \cup (\overline{C} \setminus \overline{B}).$

Задача 4.20. 12

$A = \{b, i, j, p\},$
 $B = \{g, h, j, k, t, v\},$
 $C = \{h, i, r, x, y\},$
 $D = \{g, h, o, x, y\}.$
 $X = (A \cap C) \cup B,$
 $Y = (A \cap \overline{B}) \cup (C \setminus D).$

Задача 4.23. 12

$A = \{c, f, k, m, o\},$
 $B = \{g, h, o, q, y\},$
 $C = \{h, i, u, x\},$
 $D = \{b, e, g, l\}.$
 $X = (A \cap C) \cup B,$
 $Y = (A \setminus D) \cup (\overline{C} \setminus \overline{B}).$

Задача 4.26. 12

$A = \{b, e, f, h, l, n\},$
 $B = \{b, c, e, o, t\},$
 $C = \{m, n, r, v\},$
 $D = \{a, b, k, m, s, t, x, y\}.$
 $X = (A \cup D) \cap C,$
 $Y = (\overline{A} \cap D) \cup (C \setminus B).$

Задача 4.29. 12

$A = \{a, b, e, g, j, l\},$
 $B = \{c, d, e, o, s\},$
 $C = \{h, i, v\},$
 $D = \{a, c, f, i, s, t, x, y\}.$
 $X = (A \cup B) \cap C,$
 $Y = (\overline{A} \cap D) \cup (C \setminus B).$

Задача 4.32. 12

$A = \{c, d, e, j, n\},$
 $B = \{d, e, o, t\},$
 $C = \{l, m, n, x\},$
 $D = \{b, d, i, m, s, t, x, y\}.$
 $X = (A \setminus B) \cap (C \cap D),$
 $Y = (A \setminus D) \cup (\overline{C} \setminus \overline{B}).$

Задача 4.21. 12

$A = \{a, j, l, n\},$
 $B = \{b, c, k, n, u, x\},$
 $C = \{j, k, m, y, z\},$
 $D = \{b, i, k\}.$
 $X = (A \cup D) \cap C,$
 $Y = (\overline{A} \cap \overline{B}) \setminus (C \cup D).$

Задача 4.24. 12

$A = \{a, k, l, m, n\},$
 $B = \{a, b, k, y\},$
 $C = \{k, l, x, z\},$
 $D = \{a, j, k, o, p, t, u\}.$
 $X = (A \cup B) \cap D,$
 $Y = (\overline{A} \cap \overline{B}) \setminus (C \cup D).$

Задача 4.27. 12

$A = \{b, k, n\},$
 $B = \{b, c, d, l, v\},$
 $C = \{j, k, y\},$
 $D = \{c, j, m, p, q, u, v\}.$
 $X = (A \cup B) \cap C,$
 $Y = (A \cap \overline{B}) \cup (C \setminus D).$

Задача 4.30. 12

$A = \{h, i, m, o\},$
 $B = \{b, c, m, v, w\},$
 $C = \{l, m, u, x\},$
 $D = \{b, l, n\}.$
 $X = (A \cup D) \cap C,$
 $Y = (A \cap \overline{B}) \cup (C \setminus D).$