# 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 | **Задача** 4.2 | **Задача** 4.3 |
| $A = \{a, c, f, h, l, p\}$, | $A = \{a, b, g, h, i, p\}$, | $A = \{b, c, f, j\}$, |
| $B = \{j, k, l, n, v\}$, | $B = \{h, i, o, s\}$, | $B = \{b, h, i, l, z\}$, |
| $C = \{g, h, i, x, y\}$, | $C = \{h, i, j, w\}$, | $C = \{d, e, n, o, p\}$, |
| $D = \{b, e, j, o, z\}$. | $D = \{g, h, o, w, x\}$. | $D = \{a, b, h, i, p, q, u, v\}$. |
| $X = (A \cap C) \cup (D \cap B)$, | $X = (A \backslash C) \cap \overline{B}$, | $X = (A \backslash C) \cap \overline{B}$, |
| $Y = (A \backslash D) \cup (\overline{C} \backslash \overline{B})$. | $Y = (\overline{A} \cap \overline{B}) \backslash (C \cup D)$. | $Y = (A \backslash D) \cup (\overline{C} \backslash \overline{B})$. |
| *4.2* | *4.2* | *4.2* |
| **Задача** 4.4 | **Задача** 4.5 | **Задача** 4.6 |
| $A = \{c, d, i, j\}$, | $A = \{c, e, j, l, n\}$, | $A = \{f, k, m, n, w\}$, |
| $B = \{d, g, h, l, n\}$, | $B = \{b, c, m, v\}$, | $B = \{j, k, u\}$, |
| $C = \{b, c, g, s, t\}$, | $C = \{k, l, q, x\}$, | $C = \{l, m, s\}$, |
| $D = \{b, g, i, r, s, w, x\}$. | $D = \{b, k, m, q, r, v, w\}$. | $D = \{j, l, v, y, z\}$. |
| $X = (A \cap C) \cup B$, | $X = (A \cup D) \cap C$, | $X = (A \cap C) \cup (D \cap B)$, |
| $Y = (A \cap \overline{B}) \cup (C \backslash D)$. | $Y = (A \cap \overline{B}) \cup (C \backslash D)$. | $Y = (A \cap \overline{B}) \cup (C \backslash D)$. |
| *4.2* | *4.2* | *4.2* |
| **Задача** 4.7 | **Задача** 4.8 | **Задача** 4.9 |
| $A = \{b, c, g, h, k\}$, | $A = \{f, g, h, m\}$, | $A = \{a, e, h, i, k\}$, |
| $B = \{b, c, d, k, l, w\}$, | $B = \{f, g, p, t\}$, | $B = \{c, d, k, m, u\}$, |
| $C = \{g, h, n, o, w, x\}$, | $C = \{f, g, o, z\}$, | $C = \{e, f, n, p, v, w\}$, |
| $D = \{c, g, j, p, q, u, v\}$. | $D = \{f, l, t, u, y, z\}$. | $D = \{c, d, g, y, z\}$. |
| $X = (A \cup B) \cap C$, | $X = (A \cap B) \cup C$, | $X = (A \cup B) \cap C$, |
| $Y = (A \cap \overline{B}) \cup (C \backslash D)$. | $Y = (A \cap \overline{B}) \cup (C \backslash D)$. | $Y = (\overline{A} \cap \overline{B}) \backslash (C \cup D)$. |
| *4.2* | *4.2* | *4.2* |
| **Задача** 4.10 | **Задача** 4.11 | **Задача** 4.12 |
| $A = \{d, i, j, m\}$, | $A = \{b, c, h, k, l\}$, | $A = \{c, d, h, j, l, n\}$, |
| $B = \{f, g, i, q, s\}$, | $B = \{f, g, h, n, r\}$, | $B = \{b, c, l, n, x\}$, |
| $C = \{c, d, n, w, y, z\}$, | $C = \{d, e, m, t, u\}$, | $C = \{j, k, n, t, x, y\}$, |
| $D = \{c, f, i, w, x\}$. | $D = \{a, b, f, g, v, w\}$. | $D = \{b, g, i\}$. |
| $X = (A \cap B) \cup C$, | $X = (A \cap B) \cup C$, | $X = (A \cup D) \cap C$, |
| $Y = (A \cap \overline{B}) \cup (C \backslash D)$. | $Y = (A \backslash D) \cup (\overline{C} \backslash \overline{B})$. | $Y = (A \backslash D) \cup (\overline{C} \backslash \overline{B})$. |
| *4.2* | *4.2* | *4.2* |
| **Задача** 4.13 | **Задача** 4.14 | **Задача** 4.15 |
| $A = \{b, c, e, j, m\}$, | $A = \{i, j, k, n\}$, | $A = \{c, d, i, n, o\}$, |
| $B = \{e, f, g, m, v, w\}$, | $B = \{c, d, i, s, u\}$, | $B = \{d, e, f, m, n, x\}$, |
| $C = \{g, h, l, p, q, r\}$, | $C = \{j, k, x, y\}$, | $C = \{k, l, r, x, z\}$, |
| $D = \{b, d, e, i\}$. | $D = \{c, j, m, w, x\}$. | $D = \{b, e, h, m, r, s, w, x\}$. |
| $X = (A \backslash B) \cap (\overline{C} \cap D)$, | $X = (A \cup B) \cap C$, | $X = (A \backslash B) \cap (\overline{C} \cap D)$, |
| $Y = (A \backslash D) \cup (\overline{C} \backslash \overline{B})$. | $Y = (A \cap \overline{B}) \cup (C \backslash D)$. | $Y = (A \backslash D) \cup (\overline{C} \backslash \overline{B})$. |
| *4.2* | *4.2* | *4.2* |

| | | |
|---|---|---|
| **Задача** 4.16<br>$A = \{a, c, g, l, p\}$,<br>$B = \{a, i, j, k, s\}$,<br>$C = \{i, j, w\}$,<br>$D = \{b, f, i, o, p, t, u\}$.<br>$X= (A \cap B) \cup (D \cap C)$,<br>$Y= (A \backslash D) \cup (\overline{C} \backslash \overline{B})$.<br><sub>4.2</sub> | **Задача** 4.17<br>$A = \{a, f, i, l, q\}$,<br>$B = \{h, i, l, o, v, z\}$,<br>$C = \{i, j, w, z\}$,<br>$D = \{h, p, z\}$.<br>$X= (A \backslash C) \cap \overline{B}$,<br>$Y= (\overline{A} \cap \overline{B}) \backslash (C \cup D)$.<br><sub>4.2</sub> | **Задача** 4.18<br>$A = \{c, f, g, h, m, r\}$,<br>$B = \{f, g, o, p\}$,<br>$C = \{i, j, u, y, z\}$,<br>$D = \{b, f, l, t, u, y, z\}$.<br>$X= (A \cap B) \cup C$,<br>$Y= (A \backslash D) \cup (\overline{C} \backslash \overline{B})$.<br><sub>4.2</sub> |
| **Задача** 4.19<br>$A = \{a, g, j, s\}$,<br>$B = \{a, f, g, k\}$,<br>$C = \{a, b, p, q, t\}$,<br>$D = \{f, o, p, t, u\}$.<br>$X= (A \cap B) \cup C$,<br>$Y= (\overline{A} \cap \overline{B}) \backslash (C \cup D)$.<br><sub>4.2</sub> | **Задача** 4.20<br>$A = \{h, i, j, t\}$,<br>$B = \{a, b, h, q, r\}$,<br>$C = \{h, i, r\}$,<br>$D = \{a, h, i, v, w\}$.<br>$X= (A \cup B) \cap D$,<br>$Y= (A \cap \overline{B}) \cup (C \backslash D)$.<br><sub>4.2</sub> | **Задача** 4.21<br>$A = \{a, b, h, m, u\}$,<br>$B = \{a, e, f, i, k, u\}$,<br>$C = \{i, j, n, u, v\}$,<br>$D = \{a, e, g, l, o, p, t, u\}$.<br>$X= (A \backslash B) \cap (\overline{C} \cap D)$,<br>$Y= (\overline{A} \cap D) \cup (C \backslash B)$.<br><sub>4.2</sub> |
| **Задача** 4.22<br>$A = \{a, d, f, j, n, v\}$,<br>$B = \{f, g, p, r\}$,<br>$C = \{d, e, x, z\}$,<br>$D = \{c, f, i, t, u, y, z\}$.<br>$X= (A \cap B) \cup C$,<br>$Y= (\overline{A} \cap \overline{B}) \backslash (C \cup D)$.<br><sub>4.2</sub> | **Задача** 4.23<br>$A = \{b, d, e, g, m, w\}$,<br>$B = \{e, f, g, k, o, x\}$,<br>$C = \{h, i, q, v, w\}$,<br>$D = \{a, f, l, s, t, x, y\}$.<br>$X= (A \cap B) \cup C$,<br>$Y= (\overline{A} \cap D) \cup (C \backslash B)$.<br><sub>4.2</sub> | **Задача** 4.24<br>$A = \{a, g, i, k, n, x\}$,<br>$B = \{e, f, g, q, t\}$,<br>$C = \{i, j, y\}$,<br>$D = \{e, h, m, u, v, z\}$.<br>$X= (A \backslash B) \cap (\overline{C} \cap D)$,<br>$Y= (\overline{A} \cap \overline{B}) \backslash (C \cup D)$.<br><sub>4.2</sub> |
| **Задача** 4.25<br>$A = \{a, b, c, i, y\}$,<br>$B = \{e, g, h, i, s, w\}$,<br>$C = \{b, c, k, l\}$,<br>$D = \{a, g, h, w, x\}$.<br>$X= (A \cap C) \cup B$,<br>$Y= (\overline{A} \cap \overline{B}) \backslash (C \cup D)$.<br><sub>4.2</sub> | **Задача** 4.26<br>$A = \{a, c, k, q, z\}$,<br>$B = \{a, f, g, k, l, u\}$,<br>$C = \{m, n, r\}$,<br>$D = \{b, f, j, o, p, t, u\}$.<br>$X= (A \cap B) \cup C$,<br>$Y= (A \backslash D) \cup (\overline{C} \backslash \overline{B})$.<br><sub>4.2</sub> | **Задача** 4.27<br>$A = \{f, g, j, m\}$,<br>$B = \{c, d, f, p, t\}$,<br>$C = \{f, g, w\}$,<br>$D = \{c, f, i, t, u, y, z\}$.<br>$X= (A \cup B) \cap C$,<br>$Y= (A \cap \overline{B}) \cup (C \backslash D)$.<br><sub>4.2</sub> |
| **Задача** 4.28<br>$A = \{b, c, d, o\}$,<br>$B = \{b, c, e, o, w, y\}$,<br>$C = \{a, b, g, k, l\}$,<br>$D = \{a, b, c\}$.<br>$X= (A \cup D) \cap C$,<br>$Y= (A \cap \overline{B}) \cup (C \backslash D)$.<br><sub>4.2</sub> | **Задача** 4.29<br>$A = \{a, b, c, i, q\}$,<br>$B = \{a, h, i, k, l, w\}$,<br>$C = \{j, k, t, y, z\}$,<br>$D = \{a, h, o, p, t, u\}$.<br>$X= (A \backslash C) \cap \overline{B}$,<br>$Y= (\overline{A} \cap D) \cup (C \backslash B)$.<br><sub>4.2</sub> | **Задача** 4.30<br>$A = \{a, d, f, h, m\}$,<br>$B = \{b, c, h, q, r\}$,<br>$C = \{d, e, s, y, z\}$,<br>$D = \{b, c, e, v, w\}$.<br>$X= (A \cup D) \cap C$,<br>$Y= (\overline{A} \cap \overline{B}) \backslash (C \cup D)$.<br><sub>4.2</sub> |

# Множества. Операции. Мощность.

| № | Card(X) | Card(Y) | | |
|---|---|---|---|---|
| 1 | 2 | 10 | $A\backslash D$=a,c,f,h,l,p | $\overline{C}\backslash\overline{B}$=j,k,l,n,v |
| 2 | 4 | 15 | $(\overline{A}\cap\overline{B})$=c,d,e,f,j,k,l,m,n,q,r,t,u,v,w,x,y,z | $(C\cup D)$=g,h,i,j,o,w,x |
| 3 | 3 | 8 | $A\backslash D$=c,f,j | $\overline{C}\backslash\overline{B}$=b,h,i,l,z |
| 4 | 6 | 4 | $(A\cap\overline{B})$=c,i,j | $(C\backslash D)$=c,t |
| 5 | 3 | 5 | $(A\cap\overline{B})$=e,j,l,n | $(C\backslash D)$=l,x |
| 6 | 2 | 5 | $(A\cap\overline{B})$=f,m,n,w | $(C\backslash D)$=m,s |
| 7 | 3 | 6 | $(A\cap\overline{B})$=g,h | $(C\backslash D)$=h,n,o,w,x |
| 8 | 4 | 4 | $(A\cap\overline{B})$=h,m | $(C\backslash D)$=g,o |
| 9 | 1 | 9 | $(\overline{A}\cap\overline{B})$=b,f,g,j,l,n,o,p,q,r,s,t,v,w,x,y,z | $(C\cup D)$=c,d,e,f,g,n,p,v,w,y,z |
| 10 | 7 | 6 | $(A\cap\overline{B})$=d,j,m | $(C\backslash D)$=d,n,y,z |
| 11 | 6 | 8 | $A\backslash D$=c,h,k,l | $\overline{C}\backslash\overline{B}$=f,g,h,n,r |
| 12 | 2 | 7 | $A\backslash D$=c,d,h,j,l,n | $\overline{C}\backslash\overline{B}$=b,c,l |
| 13 | 1 | 7 | $A\backslash D$=c,j,m | $\overline{C}\backslash\overline{B}$=e,f,m,v,w |
| 14 | 2 | 4 | $(A\cap\overline{B})$=j,k,n | $(C\backslash D)$=k,y |
| 15 | 0 | 8 | $A\backslash D$=c,d,i,n,o | $\overline{C}\backslash\overline{B}$=d,e,f,m,n |
| 16 | 2 | 6 | $A\backslash D$=a,c,g,l | $\overline{C}\backslash\overline{B}$=a,k,s |
| 17 | 3 | 14 | $(\overline{A}\cap\overline{B})$=b,c,d,e,g,j,k,m,n,p,r,s,t,u,w,x,y | $(C\cup D)$=h,i,j,p,w,z |
| 18 | 7 | 8 | $A\backslash D$=c,g,h,m,r | $\overline{C}\backslash\overline{B}$=f,g,o,p |
| 19 | 6 | 14 | $(\overline{A}\cap\overline{B})$=b,c,d,e,h,i,l,m,n,o,p,q,r,t,u,v,w,x,y,z | $(C\cup D)$=a,b,f,o,p,q,t,u |
| 20 | 3 | 4 | $(A\cap\overline{B})$=i,j,t | $(C\backslash D)$=r |
| 21 | 0 | 9 | $(\overline{A}\cap D)$=e,g,l,o,p,t | $(C\backslash B)$=j,n,v |
| 22 | 5 | 9 | $(\overline{A}\cap\overline{B})$=b,c,e,h,i,k,l,m,o,q,s,t,u,w,x,y,z | $(C\cup D)$=c,d,e,f,i,t,u,x,y,z |
| 23 | 7 | 12 | $(\overline{A}\cap D)$=a,f,l,s,t,x,y | $(C\backslash B)$=h,i,q,v,w |
| 24 | 0 | 9 | $(\overline{A}\cap\overline{B})$=b,c,d,h,j,l,m,o,p,r,s,u,v,w,y,z | $(C\cup D)$=e,h,i,j,m,u,v,y,z |
| 25 | 8 | 13 | $(\overline{A}\cap\overline{B})$=d,f,j,k,l,m,n,o,p,q,r,t,u,v,x,z | $(C\cup D)$=a,b,c,g,h,k,l,w,x |
| 26 | 5 | 9 | $A\backslash D$=a,c,k,q,z | $\overline{C}\backslash\overline{B}$=a,f,g,k,l,u |
| 27 | 2 | 4 | $(A\cap\overline{B})$=g,j,m | $(C\backslash D)$=g,w |
| 28 | 2 | 4 | $(A\cap\overline{B})$=d | $(C\backslash D)$=g,k,l |
| 29 | 3 | 8 | $(\overline{A}\cap D)$=h,o,p,t,u | $(C\backslash B)$=j,t,y,z |
| 30 | 2 | 11 | $(\overline{A}\cap\overline{B})$=e,g,i,j,k,l,n,o,p,s,t,u,v,w,x,y,z | $(C\cup D)$=b,c,d,e,s,v,w,y,z |