

Свойства регулярных выражений

1. $a \dots a = a^n$
n раз
2. $a \cdot a^n = aa^n = a^na = a^{n+1}$
3. $a^na^m = a^{n+m}$
4. $a + a = a$
5. $aa^* = a^*a = a^+$
6. $a + a^* = a^*$
7. $a + a^+ = a^+$
8. $a^n + a^+ = a^+$
9. $a^n + a^* = a^*$
10. $a^+ + a^* = a^*$
11. $a^+ + \varepsilon = a^*$
12. $a^na^* = a^{n-1}aa^* = a^{n-1}a^+ = (a^+)^n$
13. $a^na^+ = (a^+)^{n+1}$
14. $a^*a^+ = a^+a^* = a^*$
15. $a\varepsilon = \varepsilon a = a$
16. $(a^+)^* = (a^*)^* = a^*$
17. $ab \ c = a \ bc = abc$
18. $a + b \ + c = a + \ b + c = a + b + c$
19. $a + b \ c = ac + bc$
20. $a + c^* = a + \varepsilon + c^+ = a + \varepsilon + c^*$
21. $a^+ + b^* = a^* + b^+ = a^* + b^*$
22. $a(ba)^*b = (ab)^+$
23. $a(ba)^*b + \varepsilon = (ab)^*$
24. $a(ba)^+b = ab \ ab^+ = ((ab)^+)^2$
25. $a + b^*a = b^*a$
26. $a + ab^* = ab^*$
27. $(a + b)^* = (a^*b^*)^* = (a^*b)^*a^* = (a^+ + b)^* = (a + b^+)^* = (a^* + b^*)^* = (a^* + b)^* = (a + b^*)^* = (a^* + b^*)^* = a^*(a + b)^* = (a + b)^*b^* = a^*(a + b)^*b^*$
28. $a(a + b)^* = (ab^*)^+ = (a^+b^*)^+$
29. $(a + b)^*b = (a^*b)^+ = (a^*b^+)^+$
30. $(a + b)^+ = (a^+b^*)^+ + (a^*b^+)^+ = (ab^*)^+ + (a^*b)^+$