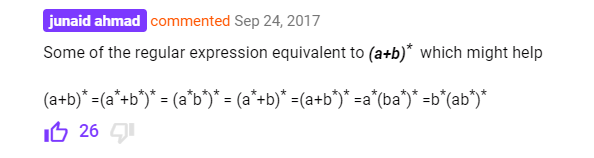
[MIT6\_045JS11\_lec05.pdf | Automata, Computability, and Complexity | Electrical Engineering and Computer Science | MIT OpenCourseWare](https://ocw.mit.edu/courses/6-045j-automata-computability-and-complexity-spring-2011/resources/mit6_045js11_lec05/)

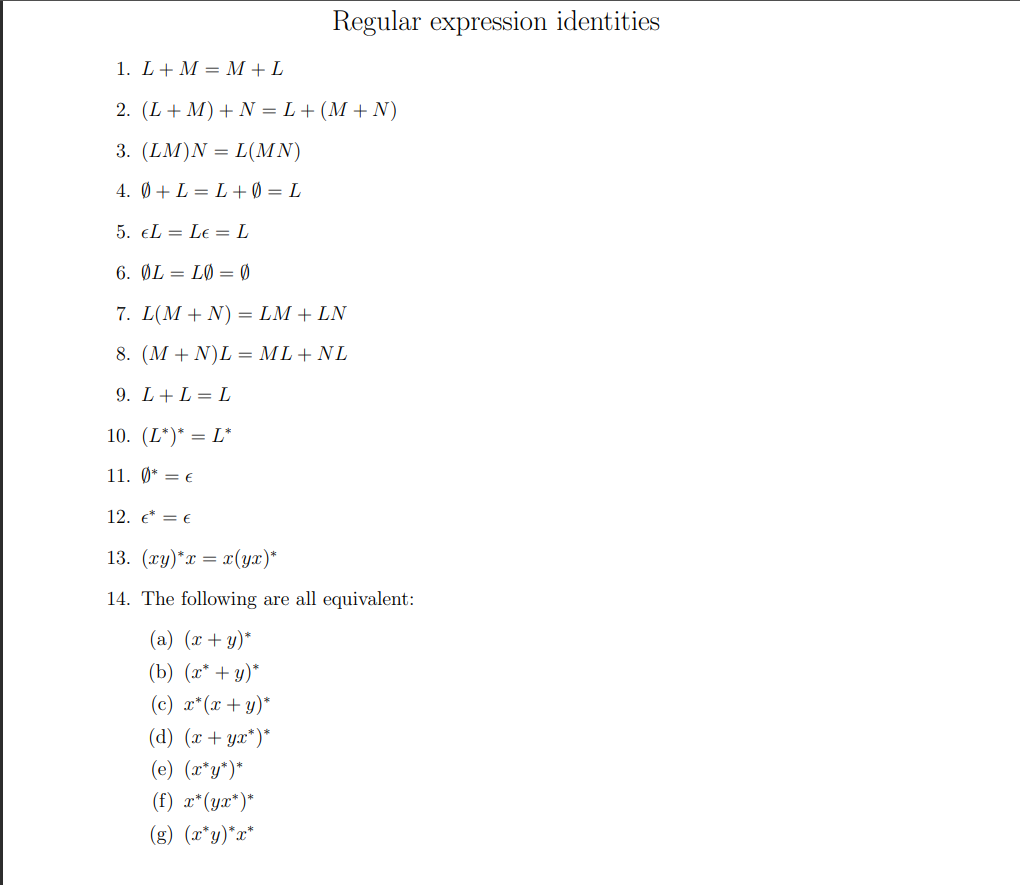
Syntax vs Semantic analysis

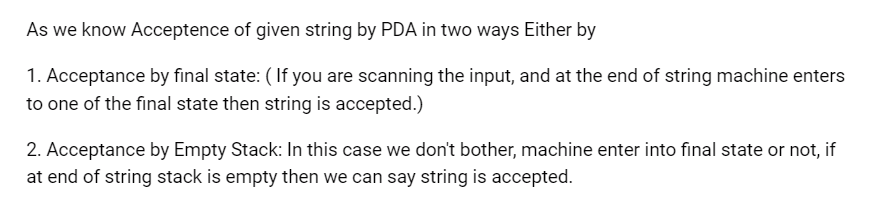
<https://gateoverflow.in/463/gate-cse-2008-question-51?show=383066#a383066>

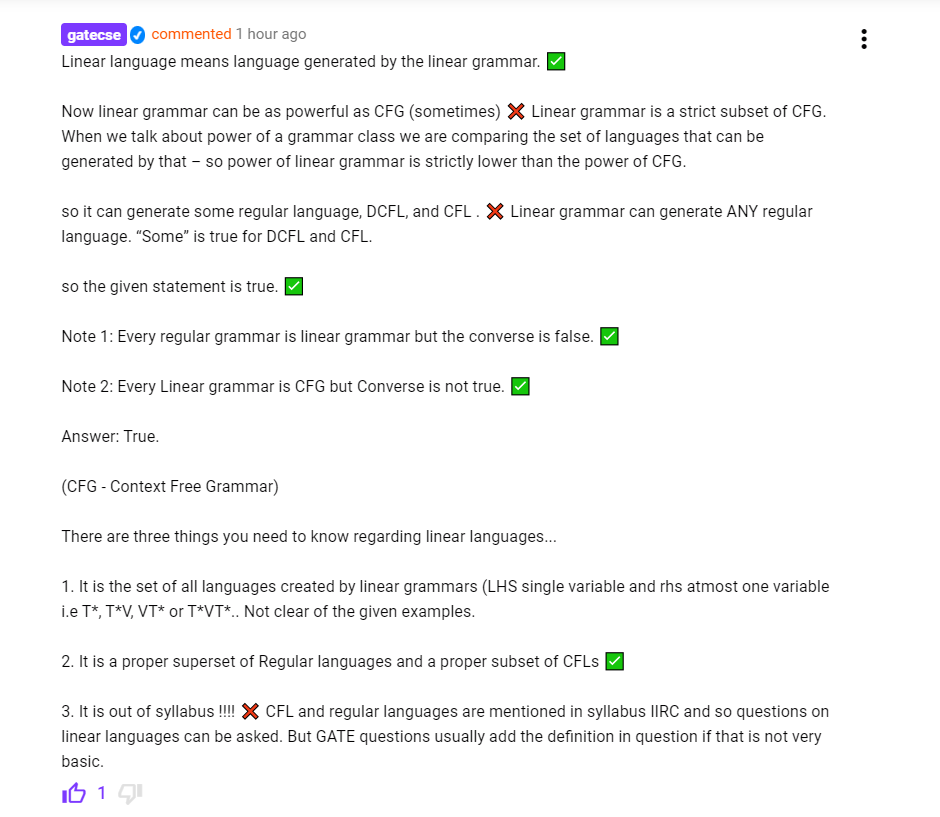
MUST MUST : [Identify the Class of a Given Language - GATE CSE](https://gatecse.in/identify-the-class-of-a-given-language/#10._.24L_.3D_.5C.7Bxwyw_.5Cmid_w.2Cx.2Cy_.E2.88.88_.28.7Ba.2Bb.7D.29.5E.2B.5C.7D.24)

Countability : [Countability : Part 1 : Easy and BEST Method - YouTube](https://www.youtube.com/watch?v=3zom7viY2Ao&list=PLIPZ2_p3RNHiMGiPFIOPJG_ApL43JkILI&index=1)









[Rices Theorem with Examples - GATE CSE](https://gatecse.in/rices-theorem/) [Most important blog. Must must go through]

[Theory of Computation: Decidability (gateoverflow.in)](https://gateoverflow.in/82912/decidability)

[Theory of Computation: GO Classes Test Series 2023 | Theory of Computation | Test 5 | Question: 13 (gateoverflow.in)](https://gateoverflow.in/379528/classes-test-series-2023-theory-computation-test-question)

[Theory of Computation: GO Classes Test Series 2023 | Theory of Computation | Test 5 | Question: 1 (gateoverflow.in)](https://gateoverflow.in/379552/classes-test-series-2023-theory-computation-test-question)

[Theory of Computation: GO Classes Test Series 2023 | Theory of Computation | Test 5 | Question: 3 (gateoverflow.in)](https://gateoverflow.in/379548/classes-test-series-2023-theory-computation-test-question)

[Theory of Computation: GO Classes Test Series 2023 | Theory of Computation | Test 5 | Question: 4 (gateoverflow.in)](https://gateoverflow.in/379546/classes-test-series-2023-theory-computation-test-question)

[Theory of Computation: GO Classes Test Series 2023 | Theory of Computation | Test 5 | Question: 5 (gateoverflow.in)](https://gateoverflow.in/379544/classes-test-series-2023-theory-computation-test-question)

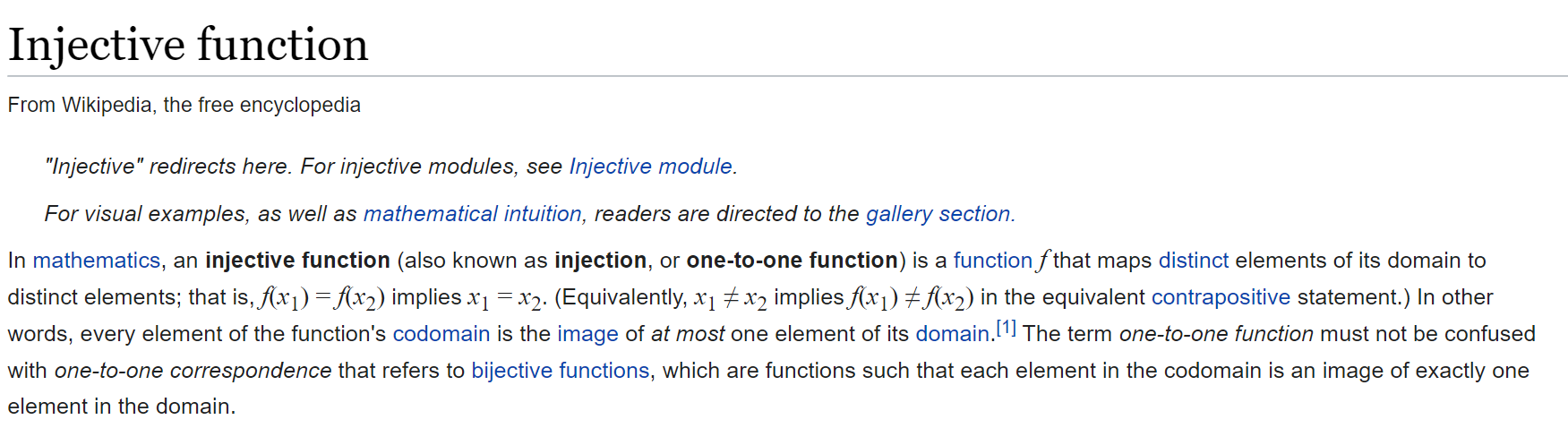
[Theory of Computation: GATE CSE 2021 Set 2 | Question: 36 (gateoverflow.in)](https://gateoverflow.in/357504/gate-cse-2021-set-2-question-36?show=357698#a357698) [Best answer by Deepak sir]

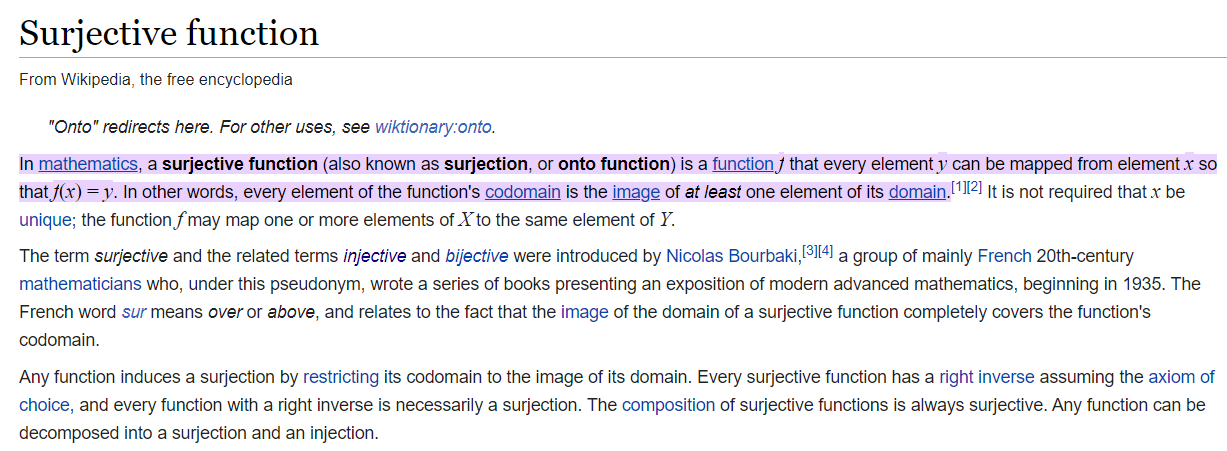
[Theory of Computation: GO Classes Test Series 2023 | Theory of Computation | Test 5 | Question: 6 (gateoverflow.in)](https://gateoverflow.in/379542/classes-test-series-2023-theory-computation-test-question)

[Theory of Computation: GO Classes Test Series 2023 | Theory of Computation | Test 5 | Question: 7 (gateoverflow.in)](https://gateoverflow.in/379540/classes-test-series-2023-theory-computation-test-question)

[Theory of Computation: GO Classes Test Series 2023 | Theory of Computation | Test 5 | Question: 10 (gateoverflow.in)](https://gateoverflow.in/379534/classes-test-series-2023-theory-computation-test-question)

[Set Theory & Algebra: GATE CSE 1988 | Question: 13ii (gateoverflow.in)](https://gateoverflow.in/94634/gate-cse-1988-question-13ii)





[functions - If $f$ is a one-one mapping from set $A$ to set $A$,then $f$ is onto. - Mathematics Stack Exchange](https://math.stackexchange.com/questions/1569041/if-f-is-a-one-one-mapping-from-set-a-to-set-a-then-f-is-onto) [very good q]

[Theory of Computation: GO Classes Test Series 2023 | Theory of Computation | Test 5 | Question: 11 (gateoverflow.in)](https://gateoverflow.in/379532/classes-test-series-2023-theory-computation-test-question)

<https://gateoverflow.in/379530/classes-test-series-2023-theory-computation-test-question?show=395668#c395668>

For (C), note that the RE languages are closed under union (use a nondeterministic TM to guess one of the languages and test that language). Also, in (D), the RE languages are closed under intersection (test one, and if it is "yes," then test the other).

[Theory of Computation: GO Classes Test Series 2023 | Theory of Computation | Test 5 | Question: 13 (gateoverflow.in)](https://gateoverflow.in/379528/classes-test-series-2023-theory-computation-test-question)

[Theory of Computation: GO Classes Test Series 2023 | Theory of Computation | Test 5 | Question: 14 (gateoverflow.in)](https://gateoverflow.in/379526/classes-test-series-2023-theory-computation-test-question)

[Theory of Computation: GO Classes Test Series 2023 | Theory of Computation | Test 5 | Question: 16 (gateoverflow.in)](https://gateoverflow.in/379522/classes-test-series-2023-theory-computation-test-question)