## Special languages module, Polytechnic university of Tehran

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## Exercise 1:

- 1. There are 3 special cases.  $\rightarrow$  There are three special cases.
- 2. X is a finite set.  $\rightarrow$  The set X is finite.
- 3. It does not tend to infinity.  $\rightarrow$  It does not tend to infinity.
- 4. It follows  $x 1 = y^4$ .  $\rightarrow$  hence(it follows that)  $x 1 = y^4$ .
- 5.  $\therefore c^{-1}$  is undefined.  $\rightarrow$  therefore  $c^{-1}$  is undefined.
- 6. The product of 2 negatives is positive. → Multiplying two negative numbers results in a positive number. (The product of two negative numbers is a positive number.)
- 7. We square the equation.  $\rightarrow$  We square both sides of the equation.
- 8. We have less solutions than we had before.  $\rightarrow$  We have fewer solutions than we had before.
- 9.  $x^2 = y^2$  are two othogonal lines.  $\rightarrow$  The equation  $x^2 = y^2$  represents two orthogonal lines.
- 10. Let us device a strategy for a proof.  $\rightarrow$  here is a strategy for the proof. (Let us consider/use/find a strategy for the proof.)
- 11. This set of matrixs are all invertible.  $\rightarrow$  This set consists of invertible matrices.
- 12. If the integral = 0 the function is undefined.  $\rightarrow$  If the integral equals 0, then the function is undefined.
- 13. Purely imaginary is when the real part is zero.  $\rightarrow$  Purely imaginary means that the real part is zero. (If the real part is zero, then the number is purely imaginary.)
- 14. Construct the set of vertex of triangles.  $\rightarrow$  Construct the set of all vertices of triangles(/of all triangles' vertices).
- 15. From the fact that x = 0, I can't divide by x.  $\rightarrow$  Since x is zero, I can't divide it by x. (I can't divide by x, because x = 0.)
- 16. A circle is when major and minor axis are the same.  $\rightarrow$  A circle is a shape with equal major and minor axes (note: Axes is the plural of axis).
- 17. The function f is not discontinuous.  $\rightarrow$  The function f is continuous.

- 18. Plug-in that expression in the other equation.  $\rightarrow$  Add that expression to both sides of the other equation.
- 19. I found less solutions than I expected.  $\rightarrow$  I found fewer solutions than I expected.
- 20. When the discriminant is < 0, you get complex.  $\rightarrow$  You get complex results if the discriminant is negative (If the discriminant is negative, you get complex results). Note: discriminant is  $\Delta = b^2 4 * a * c$ .
- 21. We prove Euler theorem.  $\rightarrow$  We prove Euler's theorem.
- 22. The definate integral is where you don't have integration limits. → An integral is definite when it doesn't have integration limits. (If an integral doesn't have integration limits, it is definite.)
- 23. The asyntotes of this hiperbola are othogonal.  $\rightarrow$  The asymptotes of this hyperbola are orthogonal.
- 24. A quadratic function has 1 stationery point. → A quadratic function has only one stationary point( /Quadratic functions have only one stationary point).
- 25. The solution is not independent of s.  $\rightarrow$  The solution depends on s.
- 26. a is negative  $\therefore \sqrt{a}$  is complex.  $\rightarrow$  Since a is negative, therefore  $\sqrt{a}$  (square root of a) is complex.
- 27. Thus x = a. (We assume that a is positive).  $\rightarrow$  Thus x = a (We assume that a is positive).
- 28. Each value is greater than their reciprical.  $\rightarrow$  Each value is greater than its reciprocal.
- 29. Remember to always check the sign.  $\rightarrow$  Remember always to check the sign.
- 30. Differentiate f n times.  $\rightarrow$  Differentiate function f, repeating this process n times.