- A: From the @309 thread (state space onwards)

  1. pendulum: walk-through of the state-space form (and beyond)
     - particularly: selection of the inputs and outputs
  2. how to cast equations with higher-order derivatives into state space form
  3. derivation of vector linearization, ie, the Jacobian matrices
  4. "What does linear vs nonlinear even mean looking at real world situations vs looking at math? "
  5. derivation of the solution of 2nd order ODEs via eigendecomposition
     - can combine with 2 to an extent
  6. Perhaps an example of a circuit that CANNOT be put in ODE state-equation form?

- B: Other questions

  - a. on "circuits" and related topics

    1. many questions about w0, BW, peaks, Bode plots, etc. -> wait for Michel
       - in the meantime, see @253, @189, @239
    2. continuing confusion about imaginary/complex numbers and their "physical meaning"
       - RE-ITERATE: at the differential equation/state equation level, EVERYTHING IS REAL
       - in the meantime, see @305, @236
    3. 2nd-order linear ODE: the precise connection between state-space, magnitude plot from phasor analysis (esp. peak), and time-domain responses (ringing)
       - in particular the case of "quadratic poles" (better understood as pairs of complex conjugate poles)
       - closely related to B.a.2
    4. How to derive the solution of first order ODEs
       - method of integrating factors: see @88

  - b. state-space formulation onwards

    1. How to eigendecompose a 2x2 matrix [a, b; c, d]?
       - example of a non-eigendencomposable matrix (2x2)?
         - [1 1; 0 1] - already in Jordan form
           - eigenvectors don’t span R^2

    2. what is a DC op pt.?
       - see @282

    3. stability?