

### Structured Electronic Design, Exercises 3

You can work on these exercises during the entire lecturing period. You will not find solutions on Blackboard yet. Some will be made available later. However, it is better to discuss your answers with other students and the professors. You will learn much more.

In lecture 2 the slide below was shown. The desired properties for an amplifier were given as:

$A, B, C, D$  indicate gain

$A, B, C, D$  constant

$A, B, C, D$  accurately known

1. What does “indicate gain” mean exactly? Especially in the case of parameter  $B$  and  $C$  this is a very interesting question.
2. Is it sufficient that one of the parameters indicates gain for a two-port to qualify as amplifier?
3. Can you give examples of two-ports that have some but not enough parameters that indicate gain?
4. Do these two-ports have more special properties?
5. Can one-ports qualify as amplifier?

