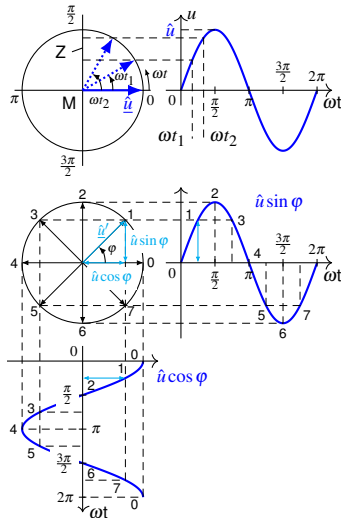
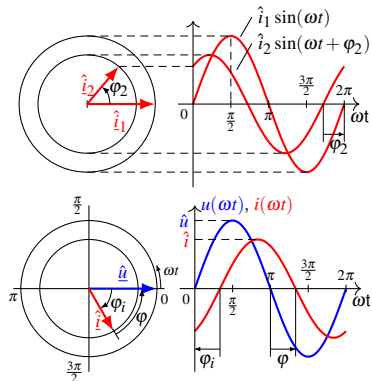


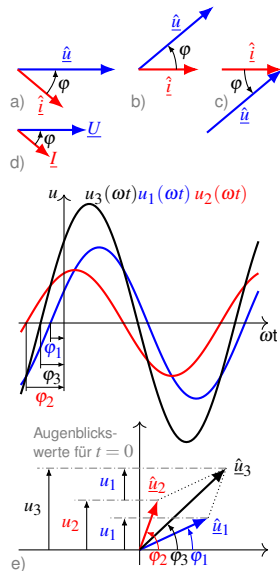
# Zeigerdiagramm I



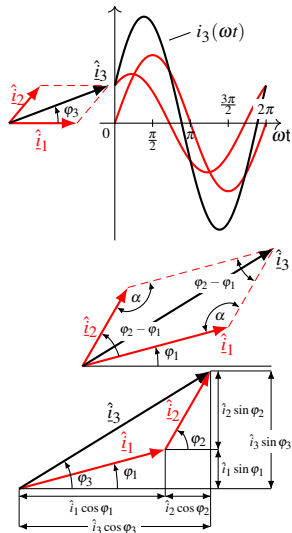
# Zeigerdiagramm II



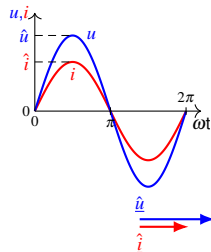
# Zeigerdiagramm III



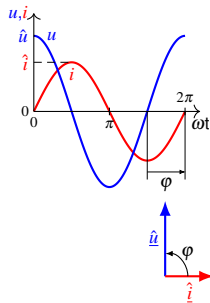
# Zeigerdiagramm IV



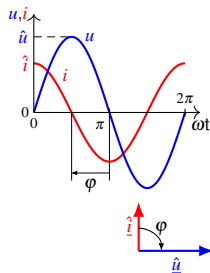
# Widerstand im Wechselstromkreis



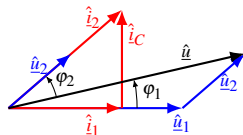
# Induktivität im Wechselstromkreis



# Kondensator im Wechselstromkreis

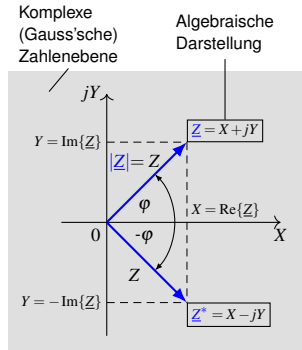


# Beispiel - Konstruktion eines Zeigerdiagramms

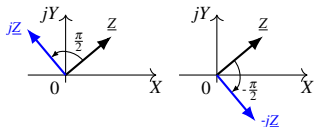
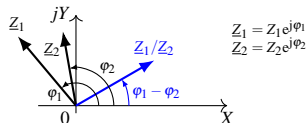
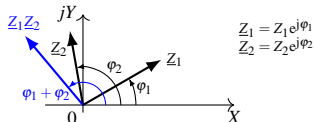
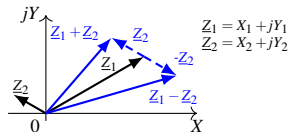




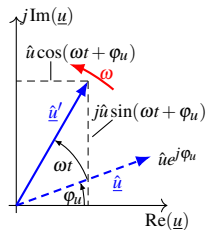
# Grundbegriffe der komplexen Rechnung



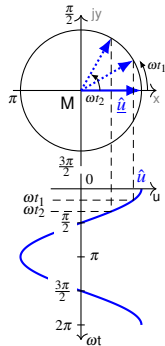
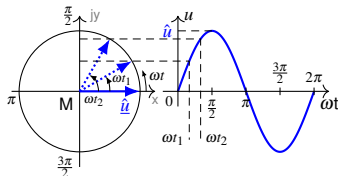
# Rechenoperationen mit komplexen Zahlen



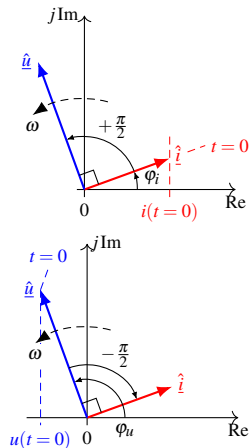
# Komplexe Wechselstromrechnung



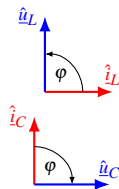
# Zeiger für komplexe Wechselstromrechnung



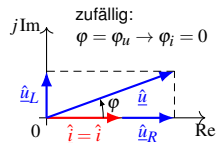
# Strom-Spannungsbeziehung für Induktivität



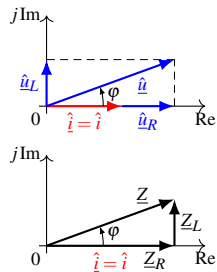
# Strom-Spannungsbeziehung im Bildbereich



# Komplexe Wechselstromrechnung - Beispiel II

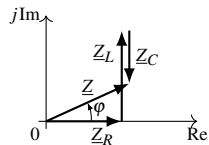
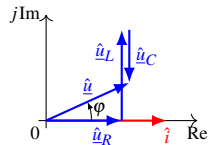


# Strom-Spannungs- und Widerstands Diagramm

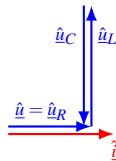




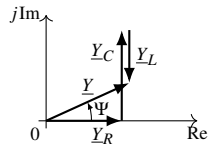
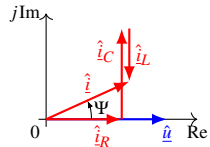
# RLC-Serienschwingkreis



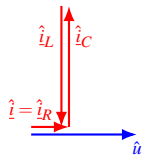
# Serienschwingkreis - Bauelementespannungen I



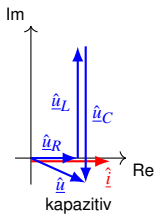
# Parallelschwingkreis



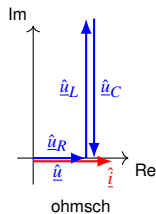
# Parallelschwingkreis - Bauelementeströme I



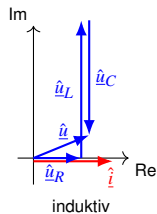
# Zeigerdiagramme für Serien-/Parallelschwingkreis



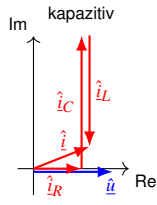
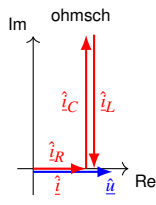
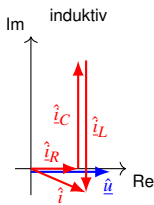
$$f < f_{res}$$



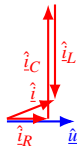
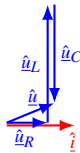
$$\text{Resonanzfall } f = f_{res}$$



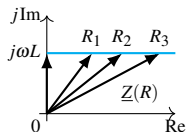
$$f > f_{res}$$



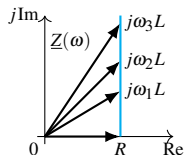
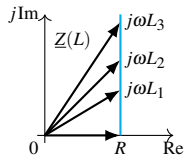
# Serien vs. Parallelschwingkreis I



# Impedanz RL-Reihenschaltung - R variabel

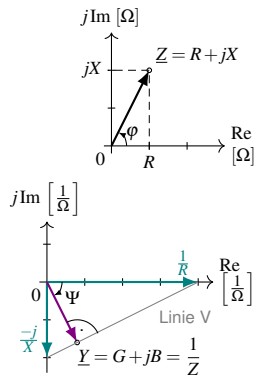


# Impedanz RL-Reihenschaltung - $L/\omega$ variabel

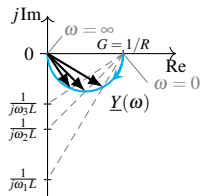
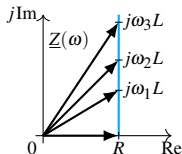
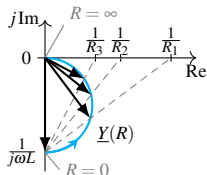
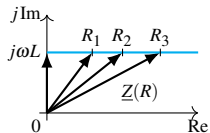




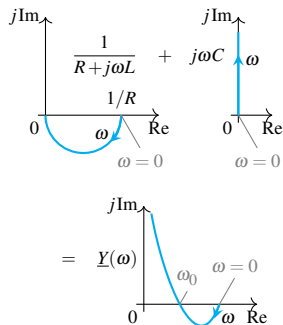
# Ortskurve Admittanz: Inversion der Impedanz



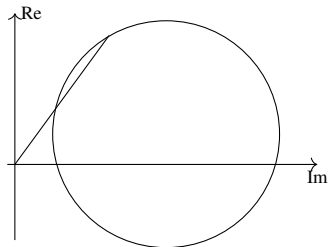
# Admittanz $RL$ -Reihenschaltung – $R$ & $\omega$ variabel



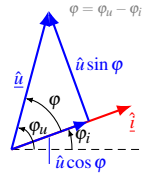
# Ortskurven von komplizierten Netzwerken I



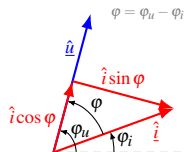
# Asynchronmaschine - Ortskurve Statorstrom



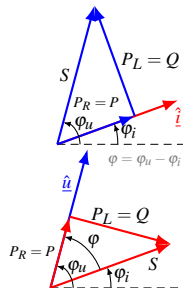
# Leistung im Wechselstromkreis - $RL$ -Schaltung I



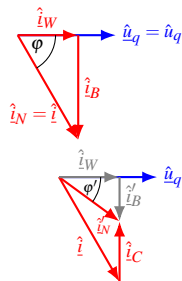
# Leistung im Wechselstromkreis - $RL$ -Schaltung II



# Scheinleistung

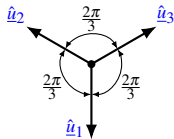


# Blindstrom-/leistungskompensation I

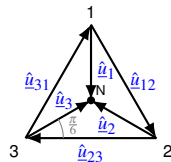




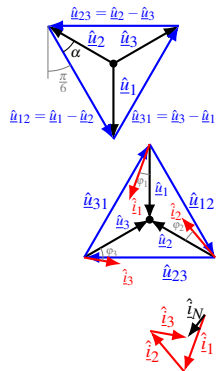
# Dreiphasensystem – Sternschaltung I



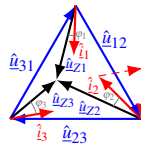
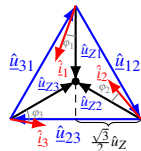
# Dreiphasensystem – Sternschaltung II



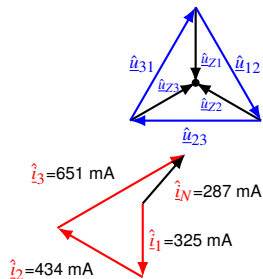
# Leistungsberechnung im Drehstromsystem



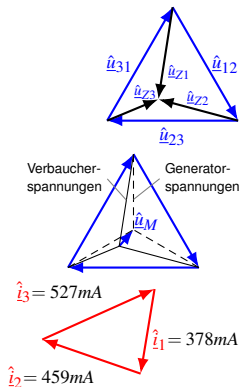
# Sternschaltung mit / ohne Sternpunkt



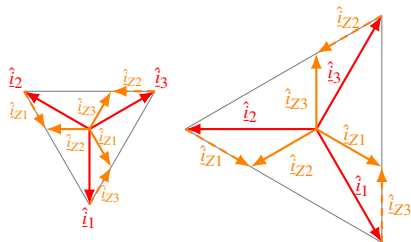
# Drei-/Vierleitersystem - Beispiel I



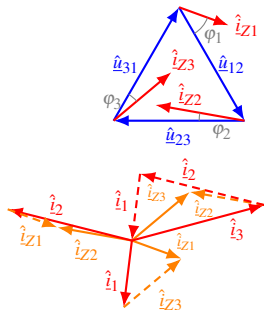
# Drei-/Vierleitersystem - Beispiel II



# Ergänzung: Leistung bei Dreieckschaltung

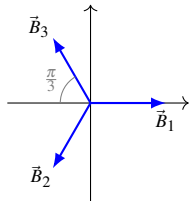


# Leistungsberechnung bei Dreieckschaltung II

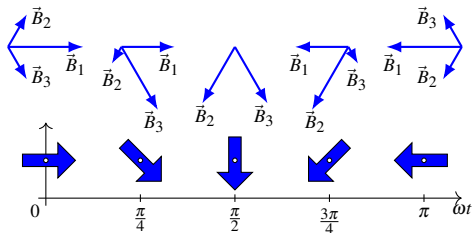




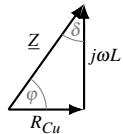
# Erzeugung Drehfeld II



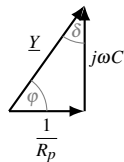
# Erzeugung Drehfeld III



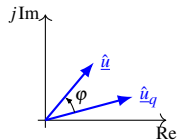
# Parasitäre Effekte bei Spulen I



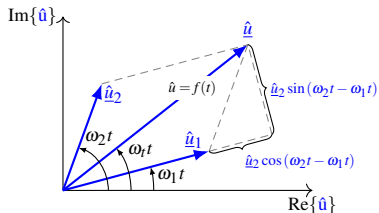
# Parasitäre Effekte bei Kondensatoren I



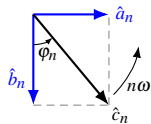
# Beschaltung einer Quelle mit Last



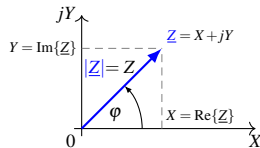
# Überlagerung sinusförmiger Schwingungen



# Fourierreihen - Spektralform

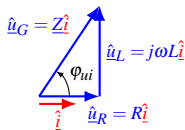


# Ergänzung: Periodizität der Tangens-Funktion

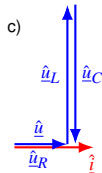
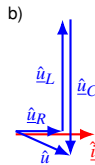
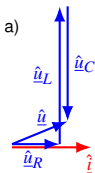




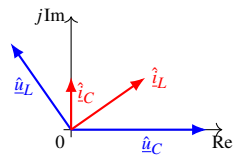
# RL-Schaltung mit gleichgerichteter Spannung II



# Clicker - RLC Serienschaltung Zeiger a,b,c



# Clicker - Zeigerdiagramm L/C



# Clicker - Zeigerdiagramm

