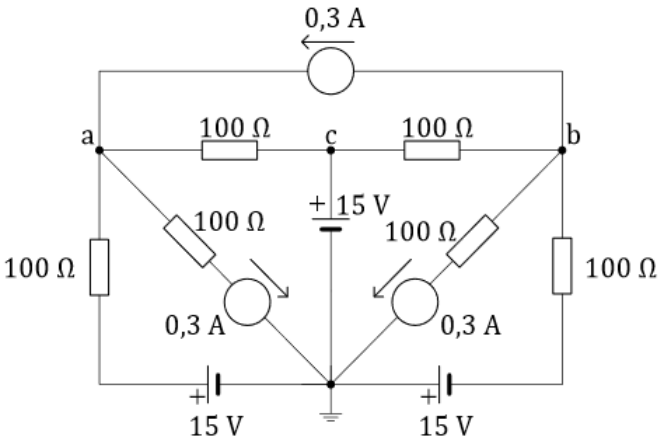
LJR 15

16. Odredite napon U_{ab} u mreži prema slici.
***3** boda*

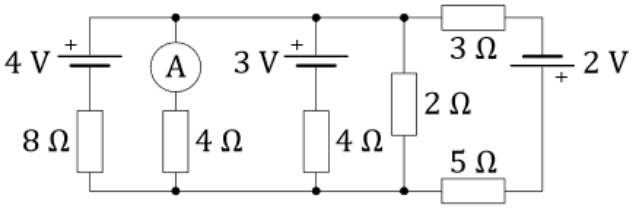
A) 15 V
B) 30 V
C) 45 V
D) 75 V
E) 90 V



JR 15

20. Odredite struju ampermetra u mreži prema slici.
***3** boda*

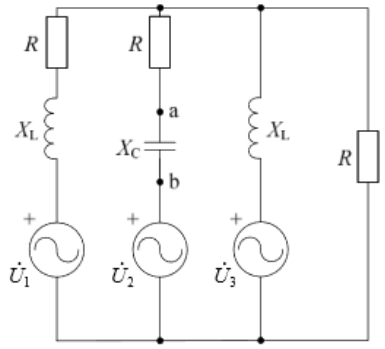
A) 0,1 A
B) 0,2 A
C) 0,3 A
D) 0,4 A
E) 0,5 A



ZI 13-14

10. Odredite $\dot{U}_{ab}$ u spoju prema slici. Zadano je:
***3** boda*
$R = 2\ \Omega$, $X_C = X_L = 2\ \Omega$, $\dot{U}_1 = 10\angle 30°$ V, $\dot{U}_2 = 10\angle 150°$ V, $\dot{U}_3 = 10\angle -90°$ V.

A) $\dot{U}_{ab} = 8{,}2\angle -44°$ V
B) $\dot{U}_{ab} = 4{,}3\angle -72°$ V
C) $\dot{U}_{ab} = 7{,}1\angle -103°$ V
D) $\dot{U}_{ab} = 5{,}1\angle -118°$ V
E) $\dot{U}_{ab} = 6{,}5\angle -91°$ V

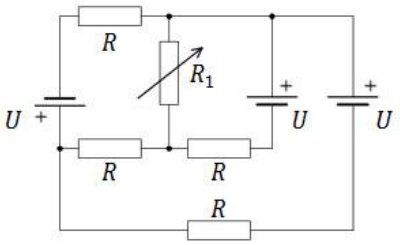


2. MI 15-16

4. Kolika mora biti vrijednost promjenjivog otpornika R_1 da bi kroz njega tekla struja od 1 A. Zadano $R = 10\ \Omega, U = 25$ V.

2 boda

A) 5 Ω
B) 9 Ω
C) 10 Ω
D) 15 Ω
E) 20 Ω

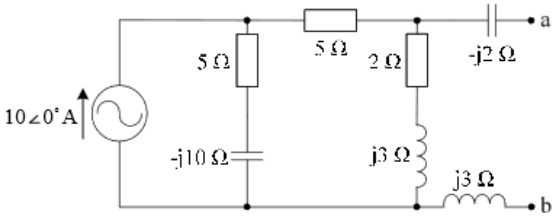


2. MI 13-14

8. Odredite parametre Theveninovog nadomjesnog izvora s priključnica *a* i *b*.

3 boda

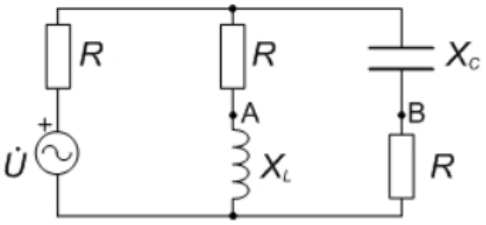
A) $\dot{U}_T = 29{,}0\angle 23°$ V, $\underline{Z}_T = 2{,}4 + j2{,}6\ \Omega$
B) $\dot{U}_T = 11{,}3\angle 5°$ V, $\underline{Z}_T = 2{,}4 + j2{,}6\ \Omega$
C) $\dot{U}_T = 22{,}8\angle 24°$ V, $\underline{Z}_T = 3{,}8 + j3{,}0\ \Omega$
D) $\dot{U}_T = 11{,}3\angle 5°$ V, $\underline{Z}_T = 2{,}7 + j3{,}4\ \Omega$
E) $\dot{U}_T = 29{,}0\angle 23°$ V, $\underline{Z}_T = 2{,}7 + j3{,}4\ \Omega$



2. MI 11-12, DEK 16

6.(3) Ako je zadano $\boldsymbol{R = X_L = X_C = 10\ \Omega}$ i $\boldsymbol{\dot{U} = 100}$ **V**, odredite **Nortonovu struju** $\boldsymbol{\dot{I}_N}$ i **Nortonovu impedanciju** $\boldsymbol{\underline{Z}_N}$ između **točaka A i B** u spoju prema slici.

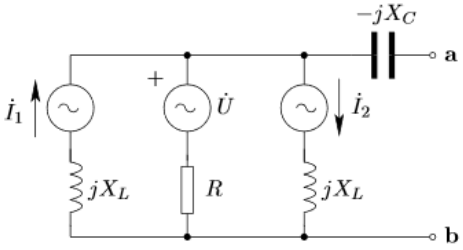
A) $\dot{I}_N = 0$ A, $\underline{Z}_N = 5 + j5\ \Omega$;
B) $\dot{I}_N = 10$ A, $\underline{Z}_N = 10\ \Omega$;
C) $\dot{I}_N = 5$ A, $\underline{Z}_N = 10\ \Omega$;
D) $\dot{I}_N = 0$ A, $\underline{Z}_N = 10\ \Omega$;
E) $\dot{I}_N = 0$ A, $\underline{Z}_N = 5 - j5\ \Omega$.



2. MI 14-15

1. (3b) Odredite elemente nadomjesnog Nortonovog spoja sa priključnica a i b ako je $\dot{U} = 10\angle{+30^0}$ V, $\dot{I}_1 = 1\angle{+45^0}$ A, $\dot{I}_2 = 1\angle{-45^0}$ A i $X_L = X_C = R = 10\ \Omega$.

A) $\underline{Z}_N = 10 - j10\ \Omega$, $\dot{I}_N = -1.707 + j2.707$ A
B) $\underline{Z}_N = 10 - j10\ \Omega$, $\dot{I}_N = -0.524 + j1.390$ A
C) $\underline{Z}_N = 5 - j5\ \Omega$, $\dot{I}_N = -1 + j2$ A
D) $\underline{Z}_N = -6 + j2\ \Omega$, $\dot{I}_N = -2.707 - j1.707$ A
E) $\underline{Z}_N = 10 - j10\ \Omega$, $\dot{I}_N = \infty$ A

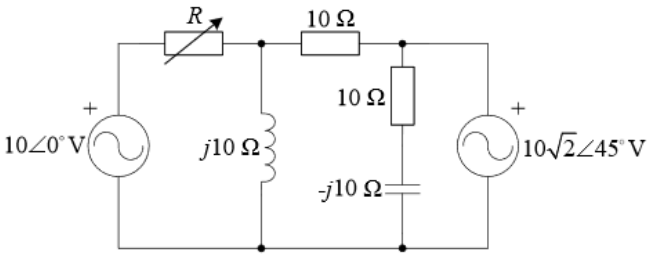


2. MI 12-13

3. Odredite maksimalnu snagu koja se može razvijati na otporu R u mreži prema slici.

3 boda

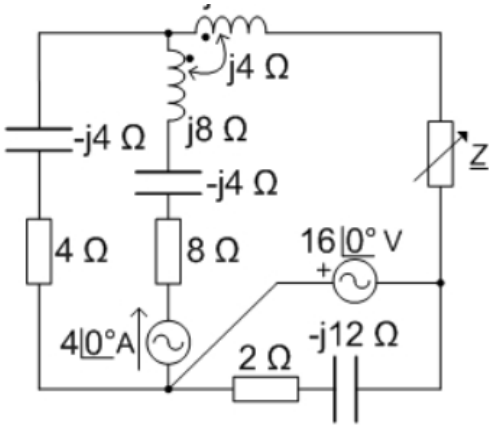
A) $P = 4{,}6$ W
B) $P = 6{,}2$ W
C) $P = 8{,}3$ W
D) $P = 9{,}7$ W
E) $P = 11{,}4$ W



2. MI 14-15, DEK 16

5.(3) Odredite **najveću radnu snagu *P*** koja se može razviti na **promjenjivoj impedanciji *Z*** u spoju prema slici.

A) 32 W;
B) 64 W;
C) 128 W;
D) 96 W;
E) 16 W.

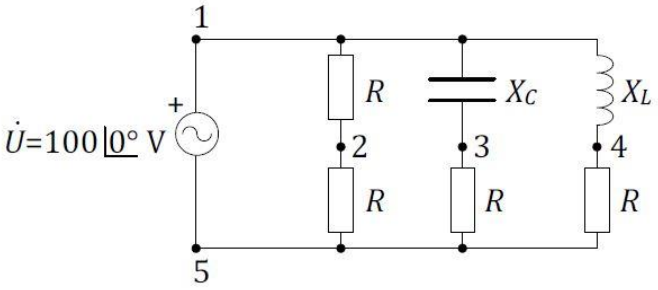


2. MI 11-12, DEK 14-15, DEK 16

11. Ako je $R = X_L = X_C$, fazor napona $\dot{U}_{53}$ u odnosu na fazor napona $\dot{U}_{23}$:

3 boda

A) prethodi 45°
B) zaostaje 45°
C) prethodi 90°
D) zaostaje 90°
E) u fazi je

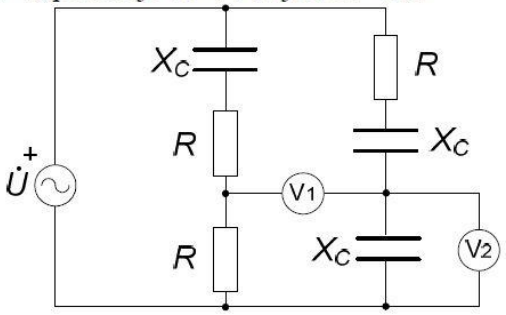


LJR 13-14

17. Odredite pokazivanje voltmetra V_1, ako voltmetar V_2 pokazuje 10 V i vrijedi $R = X_C$.

3 boda

A) 4,4 V
B) 8,9 V
C) 13,4 V
D) 17,9 V
E) 22,4 V



JR 15

17. Odredite pokazivanje voltmetra u mreži prema slici ako je napon izvora $U = 10$ V i vrijedi $R = X_L = \frac{1}{2}X_C$.

3 boda

A) 1,6 V
B) 3,7 V
C) 5,8 V
D) 7,9 V
E) 10 V