```
x = 5; y = 5;

Print["k_AB=", kAB = 30 × 10^-6, "m^-3"]
Print["k_BC=", kBC = (200 × 10^-6)/x, "m^-3"]
Print["k_CD=", kCD = 20 × 10^-6, "m^-3"]
Print["(ANKM)_BC=", ANKMBC = (-x × y)/8]
Print["(ANKM)_CB=", ANKMCB = (x × y)/8]
Print["(ANKM)_CD=", ANKMCD = -10 × y]
MAB = 12000 × θB;
MBA = 24000 × θB;
MBC = (160000)/x × θB + (80000)/x × θc + ANKMBC;
MCB = (160000)/x × θc + (80000)/x × θB + ANKMCB;
MCD = 12000 × θc + ANKMCD;
TETA = Inverse[{{24000 + 160000/x, 80000/x}, {80000/x, 12000 + 160000/x}}].{{-ANKMBC}, {-ANKMCD - ANKMCB}};
Print["θB=", θB = Part[TETA, 1, 1] // N]
Print["θc=", θc = Part[TETA, 2, 1] // N]
Print["M_AB=", MAB // N, "kNm"]
Print["M_BA=", MBA // N, "kNm"]
Print["M_BC=", MBC // N, "kNm"]
Print["M_CB=", MCB // N, "kNm"]
Print["M_CD=", MCD // N, "kNm"]
```

```
Print["--------------------------------Alternatif
   Kabul (Hareketli Sistem)--------------------------------"]
x = 1; y = 71;

Print["k_AB=", kAB = 30 × 10^-6, "m^-3"]
Print["k_BC=", kBC = (200 × 10^-6)/x, "m^-3"]
Print["k_CD=", kCD = 20 × 10^-6, "m^-3"]
Print["(ANKM)_BC=", ANKMBC = (-x × y)/8]
Print["(ANKM)_CB=", ANKMCB = (x × y)/8]
Print["(ANKM)_CD=", ANKMCD = -10 × y]
MAB = 12000 × θ_B - 36000 ψ;
MBA = 24000 × θ_B - 36000 ψ;
MBC = (160000)/x × θ_B + (80000)/x × θ_c + ANKMBC;
MCB = (160000)/x × θ_c + (80000)/x × θ_B + ANKMCB;
MCD = 12000 × θ_c + ANKMCD;
TETA = Inverse[{{24000 + 160000/x, 80000/x, 36000}, {80000/x, 12000 + 160000/x, 0}, {36000, 0, 72000}}].{{-ANKMBC}, {-ANKMCD - ANKMCB}, {75 × y}};
Print["θ_B=", θ_B = Part[TETA, 1, 1] // N]
Print["θ_c=", θ_c = Part[TETA, 2, 1] // N]
Print["ψ=", ψ = -Part[TETA, 3, 1] // N]
Print["M_AB=", MAB // N, "kNm"]
Print["M_BA=", MBA // N, "kNm"]
Print["M_BC=", MBC // N, "kNm"]
Print["M_CB=", MCB // N, "kNm"]
Print["M_CD=", MCD // N, "kNm"]
```

```
x = 1; y = 71;

Print["DS_BA=", DSBA = (3/x) / ((3/x) + (3/5) + (4/x)) // N]

Print["DS_BC=", DSBC = (3/5) / ((3/x) + (3/5) + (4/x)) // N]

Print["DS_BD=", DSBD = (4/x) / ((3/x) + (3/5) + (4/x)) // N]

Print["DS_DB=", DSDB = (4/x) / ((4/x) + (3/5)) // N]

Print["DS_DE=", DSDE = (3/5) / ((4/x) + (3/5)) // N]

Print["ANKM_BA=", ANKMBA = y × x^2 / 8 // N]

Print["ANKM_BD=", ANKMBD = -y × x^2 / 12 // N]

Print["ANKM_DB=", ANKMDB = y × x^2 / 12 // N]

S1BA = (-ANKMBA - ANKMBD) × DSBA;
S1BC = (-ANKMBA - ANKMBD) × DSBC;
S1BD = (-ANKMBA - ANKMBD) × DSBD;
S1DB = -ANKMDB × DSDB;
S1DE = -ANKMDB × DSDE;
S2BA = (-S1DB / 2) × DSBA;
S2BC = (-S1DB / 2) × DSBC;
S2BD = (-S1DB / 2) × DSBD;
S2DB = (-S1BD / 2) × DSDB;
S2DE = (-S1BD / 2) × DSDE;
S3BA = (-S2DB / 2) × DSBA;
S3BC = (-S2DB / 2) × DSBC;
S3BD = (-S2DB / 2) × DSBD;
S3DB = (-S2BD / 2) × DSDB;
S3DE = (-S2BD / 2) × DSDE;
S4BA = (-S3DB / 2) × DSBA;
S4BC = (-S3DB / 2) × DSBC;
S4BD = (-S3DB / 2) × DSBD;
S4DB = (-S3BD / 2) × DSDB;
S4DE = (-S3BD / 2) × DSDE;
S5BA = (-S4DB / 2) × DSBA;
S5BC = (-S4DB / 2) × DSBC;
S5BD = (-S4DB / 2) × DSBD;
S5DB = (-S4BD / 2) × DSDB;
S5DE = (-S4BD / 2) × DSDE;
```

$$BA = ANKMBA + S1BA + S2BA + S3BA + S4BA + S5BA$$
$$BC = S1BC + S2BC + S3BC + S4BC + S5BC$$
$$BD = ANKMBD + S1BD + \left(S1DB / 2\right) + S2BD + \left(S2DB / 2\right) + S3BD + \left(S3DB / 2\right) + S4BD + \left(S4DB / 2\right) + S5BD$$
$$DB = ANKMDB + S1DB + \left(S1BD / 2\right) + S2DB + \left(S2BD / 2\right) + S3DB + \left(S3BD / 2\right) + S4DB + \left(S4BD / 2\right) + S5DB$$
$$DE = S1DE + S2DE + S3DE + S4DE + S5DE$$

$$x = 7;\ y = 47;$$

$$SIS = \begin{pmatrix} \left(\frac{4\times0.354}{x} + \frac{1}{x}\right) & 0 \\ 0 & \left(\frac{4\times0.354}{x}\right) \end{pmatrix};$$

$$dep = \text{Inverse}[SIS].\begin{pmatrix} 0 \\ -y \end{pmatrix};$$

$$k1 = \begin{pmatrix} \frac{-0.354}{x} & \frac{-0.354}{x} \\ \frac{-0.354}{x} & \frac{-0.354}{x} \end{pmatrix}.dep \text{ // MatrixForm}$$

$$k2 = \begin{pmatrix} \frac{-0.354}{x} & \frac{0.354}{x} \\ \frac{0.354}{x} & \frac{-0.354}{x} \end{pmatrix}.dep \text{ // MatrixForm}$$

$$k3 = \begin{pmatrix} \frac{-1}{x} & 0 \\ 0 & 0 \end{pmatrix}.dep \text{ // MatrixForm}$$

$$k4 = \begin{pmatrix} \frac{-0.354}{x} & \frac{-0.354}{x} \\ \frac{-0.354}{x} & \frac{-0.354}{x} \end{pmatrix}.dep \text{ // MatrixForm}$$

$$k5 = \begin{pmatrix} \frac{-0.354}{x} & \frac{0.354}{x} \\ \frac{0.354}{x} & \frac{-0.354}{x} \end{pmatrix}.dep \text{ // MatrixForm}$$

$$k6 = \begin{pmatrix} \frac{-1}{x} & 0 \\ 0 & 0 \end{pmatrix}.dep \text{ // MatrixForm}$$