

1. 6.75 W
2. 18 W
3. 48 W
4. 144 W
5. 5 K Ω
6. 7.2 mS
7. 9 W
8. 72 W
9. If the bulbs are connected in series, all the bulbs will go off, since the failure of 1 bulb causes that the circuit current is zero. When they are connected in parallel, the failure of 1 bulb only causes that no current flows through that specific bulb, but the others will still be on.
10. $I_1=8\text{mA}$
11. $I_1=I_2=10\text{mA}$
12. $I_1=8\text{mA}$
13. $I_1=12\text{ mA}$ and $I_2=6\text{mA}$
14. $I_2=-8\text{mA}$; $I_1=10\text{mA}$
15. $I_x=2\text{mA}$
16. $I_L=0.4\text{mA}$
17. $I=6\text{mA}$; $I_o=3\text{mA}$; $I_1=-2\text{mA}$
18. $I_x=9\text{mA}$; $I_z=-2\text{mA}$; $I_y=-10\text{mA}$
19. $V_{bd}=8\text{V}$
20. $V_{ad}=7\text{V}$
21. $V_{ec}=-6\text{V}$
22. $V_{ac}=-6\text{V}$; $V_{cf}=1\text{V}$
23. $V_{ef}=-10\text{V}$; $V_{dc}=20\text{V}$; $V_{bc}=18\text{V}$; $V_{da}=-6\text{V}$; $V_{bn}=26\text{ V}$; $V_{gc}=-26\text{V}$; $V_{di}=24\text{V}$; $V_{fa}=-16\text{V}$; $V_{ac}=-4\text{V}$; $V_{ia}=-30\text{V}$; $V_{nf}=-18\text{V}$
24. $V_{ac}=10\text{V}$
25. $V_{ce}=11\text{ V}$
26. $V_o=(-24/7)\text{V}$
27. $V_o=60\text{ V}$
28. $V_{ba}=-8.25\text{V}$
29. $V_{bd}=6\text{V}$
30. $V_x=4\text{ V}$
31. $V_{ab}=-4\text{V}$
32. $V_s=7\text{V}$
33. $P_{6\text{V}}=-2\text{mW}$ (absorbed); $P_{12\text{V}}=4\text{mW}$ (supplied)
34. $P_{15\text{V}}=12\text{mW}$ (absorbed)
35. $V_1=5\text{V}$
36. $P=1.92\text{mW}$
37. $P=-9.375\text{mW}$
38. $P=3.125\text{mW}$
39. $I_o=6\text{mA}$

40. $I_o = -3\text{mA}$
41. $P_{2\text{mA}} = -2.36\text{mW}$
42. $I_A = -3.41\text{mA}$
43. $I_o = 4.5\text{mA}$
44. $I_o = 2/3\text{A}$
45. $P_{2\text{IA}} = -355.55\text{mW}$
46. $I_L = 2/3\text{mA}$
47. $P_{2\text{VA}} = 4.5\mu\text{W}$
48. $R_{AB} = 12\text{k}\Omega$
49. $R_{AB} = 3\text{k}\Omega$
50. $R_{AB} = 5.44\text{k}\Omega$
51. $R_{AB} = 3\text{k}\Omega$
52. $R_{AB} = 2\text{k}\Omega$
53. $R_{AB} = 2\text{k}\Omega$
54. $R_{AB} = 3\text{k}\Omega$
55. $R_{\text{eq}} = 7.2\text{k}\Omega$
56. $R_{AB} = 17.45\text{k}\Omega$
57. We will do this exercise in class
58. Many combinations possible
59. A. $1050\ \Omega$, B. $479.4\ \Omega$, C. $24.2\ \text{k}\Omega$
60. A. $P_{\text{max}} = 25.9\text{mW}$; $P_{\text{min}} = 253.9\text{mW}$
61. $I_1 = 1.33\text{mA}$; $V_o = 2.67\text{V}$
62. $V_o = 4\text{V}$
63. $V_{ab} = 6\text{V}$; $V_{dc} = -8\text{V}$
64. $V_1 = 5\text{V}$; $I_A = -1.5\text{mA}$
65. $I_o = 6\text{mA}$
66. $I_o = -1.33\text{mA}$
67. $V_1 = 5\text{V}$
68. $V_o = -4\text{V}$
69. $V_{ab} = -6\text{V}$
70. $V_{ab} = -5.83\text{V}$
71. $I_1 = -0.3\text{A}$; $I_2 = 0.6$; $V_1 = -7.2\text{V}$
72. $V_s = 12\text{V}$
73. $V_s = 48\text{V}$
74. $I_s = 7.5\text{mA}$
75. $V_s = 9.5\text{V}$
76. $V_s = -92.4\text{V}$
77. $V_s = 30\text{V}$
78. $I_s = 8\text{mA}$
79. $I_s = 3\text{A}$
80. $V_1 = 6\text{V}$
81. $I_s = 2\text{mA}$

82. $V_s=30V$
83. $V_s=36V$
84. $P_{10A}=2kW$
85. $V_x=42.5V$
86. $V_s=12V; P_{24V}=288W$
87. $I_A=-26mA$
88. $V_A=-46V$
89. $I_A=42mA$
90. $V_s=25V$
91. $V_x=18V$
92. $V_x=-6.5V$
93. $V_A=-10V R_B=2k\Omega$
94. $P=63mW$
95. $G=4$
96. $P=48mW$
97. $I_o=1.29A$
98. $I_o=3A$
99. $V_o=3.43V$
100. $P=3mW$
101. $V_o=10V$
102. $V_o=6.86V$
103. $I_1=24A$
104. $I_1=6A; I_2=-4A; I_3=3A$
105. $I_o=-18.18mA$
106. $I_o=(2/3)A$
107. $G=-45.76$
108. $P_{12k\Omega}=4.32mW$
109. $P_{12k\Omega}2.08mW$
110. $K=-0.75$
111. $I_x=(8/3)A$