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Sample Problems With Three Resistors

Worksheet



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| VS | R1 | R2 | R3 |

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| 1. | VS = 8 V, R1 = 200 Ω, R2 = 400 Ω R3 = 400 Ω, **Solve for RT** **and IT** | **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** |
| 2. | VS = 15 V, R1 = 330 Ω, R2 = 470 Ω R3 = 250 Ω, **Solve for RT** **and IT** | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

1. VS = 15 V, R1 = 2.7 kΩ, R2 = 4.5 kΩ, R3 = 6.2 kΩ, **Solve for RT** **and IT \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

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| 4. | VS = 9 V, R1 = 15 kΩ, R2 = 8.6 kΩ, R3 = 6 kΩ, **Solve for RT** **and IT** | **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** |
| 5. | IT = 25 mA, R1 = 4 kΩ, R2 = 4 kΩ, R3 = 2 kΩ, **Solve for Vs** | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| 6. | IT = 8 mA, R1 = 1.2 kΩ, R2 = 3.75 kΩ, R3 = 2 kΩ, **Solve for Vs** | **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** |

1. IT = 20 mA, R1 = 1.5 kΩ, R2 = 3 kΩ, R3 = 2 kΩ, **Solve for I1, I2,** **and I3** **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

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| 8. | IT = 15 mA, R1 = 4 kΩ, R2 = 12 kΩ, R3 = 6 kΩ, **Solve for I1, I2,** **and I3** | **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** |
| 9. | VS = 20 V, IT = 100 mA, I2 = 20 mA, I2 = 30 mA, **Solve for R1** | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| 10. | VS = 35 V, IT = 20 mA, I2 = 10.89 mA, I3 = 5.93 mA, **Solve for R1** | **\_\_\_\_\_\_**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| 11. | VS = 18 V, IT = 6.2 mA, R1 = 15 kΩ, R3 = 9 kΩ, **Solve for R2** | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| 12. | VS = 10 V, IT = 69.5 mA, R1 = 330 Ω, R3 = 560 Ω, **Solve for R2** | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| 13. | IT = 11.1 mA, R1 = 14.4 kΩ, I1 = 2.5 mA, R3 = 10 kΩ, **Solve for R2** | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| 14. | V1 = 9 V, R1 = 3 kΩ, I2 = 2.5 mA, I3 = 3.6 mA, **Solve for R2** **and R3** | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |