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| /98 | | | | | | | | |
| **Physics 30 - Lesson 18A**  checkmark | | | | | | | | |
| 1)  /3 |  | | checkmark  checkmark | | | | | |
| 2)  /4 | a)  b) | checkmark    checkmark  checkmark  checkmark | | | | | | |
| 3)  /5 | a) | checkmark | | | | | | |
| b) | checkmark | | | | | | |
| c) | 4  9  12  checkmark | | | | | checkmark    checkmark  checkmark | |
| 4)  /3 | checkmark | | | | checkmark | | | |
| 5)  /4 | checkmark  Before    checkmark | | | After  checkmark    checkmark | | | | |
| 6)  /5 | R­1  R­2 - radio  10V | | | | | checkmark  checkmark    checkmark  checkmark  checkmark | | |
| 7) a)  /5 | 673A  checkmark  constant | | | | | | | checkmark    checkmark  checkmark  checkmark |
| 7) b)  /5 | 673B    checkmark | | | | checkmark    checkmark  checkmark  checkmark | | | |

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| 7) c)  /12 | 674A | | | | | checkmark  checkmark  checkmark | | | |
| checkmark  checkmark  checkmark  checkmark | | | | | checkmark  checkmark  checkmark  checkmark  checkmark | | | |
| checkmark  checkmark | checkmark  checkmark | checkmark  checkmark | | | | checkmark  checkmark | |  |
| 7) d)  /5 | 674B  checkmark  checkmark    checkmark  checkmark | | | | | | checkmark  checkmark  checkmark  checkmark  checkmark  checkmark | | |
| 7) e)  /6 | 674C    checkmark  checkmark | | | | checkmark  checkmark    checkmark  checkmark  checkmark  checkmark  checkmark  checkmark | | | checkmark  checkmark | |
| 8)  /3  /6 | i) | | | checkmark  checkmark  checkmark  checkmark  checkmark  checkmark | | | | | |
| ii) redraw the circuit to see what is series and what is parallel  2.00  4.00  10.0  6.00  5.00  3.00  8.00  A B | | | | | | | | |
| checkmark  checkmark  checkmark  checkmark  checkmark  checkmark  checkmark  checkmark | | | checkmark  checkmark  checkmark  checkmark | | | | | |

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| 9)  /10 | checkmark  checkmark    checkmark  checkmark  checkmark  checkmark  checkmark  checkmark | checkmark  checkmark    checkmark  checkmark  checkmark  checkmark  checkmark  checkmark  checkmark  checkmark  checkmark  checkmark | |
| 10)  /5 | checkmark  checkmark | checkmark  checkmark    checkmark  checkmark  checkmark  checkmark  checkmark  checkmark | |
| 11)  /5 | checkmark  checkmark    checkmark  checkmark  checkmark  checkmark | | checkmark  checkmark    checkmark  checkmark |
| 12)  /4 | checkmark  checkmark  checkmark  checkmark | | checkmark  checkmark    checkmark  checkmark |

13)

2 each

A. If X is open, no current can flow into the circuit. No lights are on.

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B. With X and Z closed, all of the lights are on.

C. With X closed and Z open the two lights in the middle are on, while the light in series with Z is off.

D. When switch Y is closed it acts to “short” the circuit, i.e. the current bypasses all the lights since the current flows through the path of least resistance. Therefore, none of the lights are on.