



Color Math: Adding and Subtracting Colors of Light

Directions: Use the Color Vision simulator by PhET (available online at bit.ly/colormathematics) to complete the following addition and subtraction problems with the colors of light. When you go to the simulation page, choose the RGB Bulb option. Then, for each color math problem, turn on/off the colored flashlights in the simulator to figure out the missing color in each equation. After you've figured out all ten problems, try exploring other combinations by mixing different amounts of each color of light.

1. **RED + _____ = YELLOW**
2. **CYAN — BLUE = _____**
3. **RED + BLUE = _____**
4. **MAGENTA — RED = _____**
5. **BLUE + _____ + GREEN = WHITE**
6. **_____ — BLUE = YELLOW**
7. **GREEN + _____ = CYAN**
8. **WHITE — RED = _____**
9. **_____ — GREEN = RED**
10. **WHITE — GREEN = _____**

Answers: 1) G, 2) G, 3) M, 4) B, 5) R, 6) W, 7) B, 8) C, 9) Y, 10) W