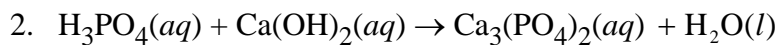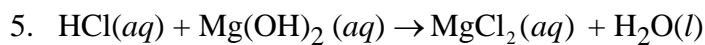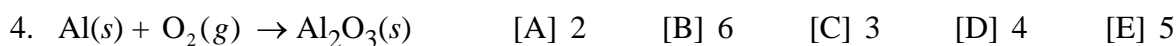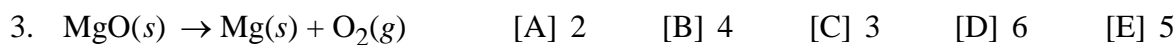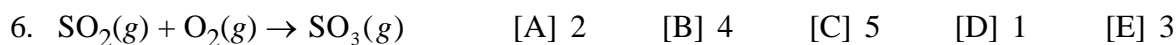# Balancing Equations Worksheet

When the following equations are balanced using the smallest possible integers, what is the number in front of the underlined substance in each case?

1. $C_3H_8(g) + \underline{O_2(g)} \rightarrow CO_2(g) + H_2O(g)$ [A] 3   [B] 2   [C] 6   [D] 4   [E] 5

2. $H_3PO_4(aq) + Ca(OH)_2(aq) \rightarrow Ca_3(PO_4)_2(aq) + \underline{H_2O(l)}$

    [A] 5   [B] 4   [C] 6   [D] 3   [E] 2

3. $\underline{MgO(s)} \rightarrow Mg(s) + O_2(g)$ [A] 2   [B] 4   [C] 3   [D] 6   [E] 5

4. $Al(s) + \underline{O_2(g)} \rightarrow Al_2O_3(s)$ [A] 2   [B] 6   [C] 3   [D] 4   [E] 5

5. $HCl(aq) + Mg(OH)_2 (aq) \rightarrow \underline{MgCl_2(aq)} + H_2O(l)$

    [A] 3   [B] 1   [C] 4   [D] 2   [E] 5

6. $SO_2(g) + O_2(g) \rightarrow \underline{SO_3(g)}$ [A] 2   [B] 4   [C] 5   [D] 1   [E] 3

7. The sum of the coefficients when the following equation is balanced is
$BaSO_4 + K_3PO_4 \rightarrow Ba_3(PO_4)_2 + K_2SO_4$

    [A] 11   [B] 9   [C] 7   [D] 4   [E] 8

8. Determine the coefficient for O_2 when the following equation is balanced in standard form (smallest whole number integers).
$C_4H_{10}(g) + O_2(g) \rightarrow CO_2(g) + H_2O(g)$
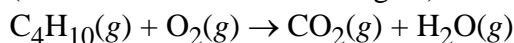
    [A] 13   [B] 4   [C] 10   [D] 20   [E] 8

When the following equations are balanced using the smallest possible integers, what is the number in front of the underlined substance in each case?
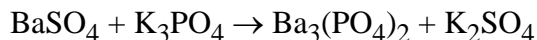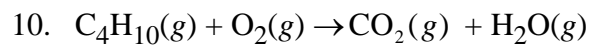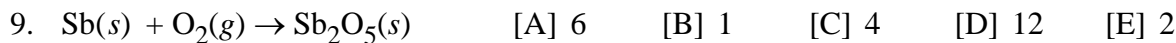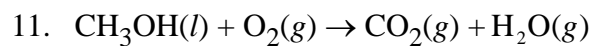
9. $\underline{Sb(s)} + O_2(g) \rightarrow Sb_2O_5(s)$ [A] 6   [B] 1   [C] 4   [D] 12   [E] 2

10. $C_4H_{10}(g) + O_2(g) \rightarrow \underline{CO_2(g)} + H_2O(g)$

    [A] 8   [B] 2   [C] 4   [D] 10   [E] 6

When the following equations are balanced using the smallest possible integers, what is the number in front of the underlined substance in each case?
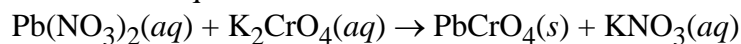
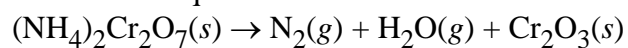11. $CH_3OH(l) + O_2(g) \rightarrow CO_2(g) + \underline{H_2O(g)}$

    [A] 6   [B] 12   [C] 1   [D] 2   [E] 4

12. Balance the equation
$Pb(NO_3)_2(aq) + K_2CrO_4(aq) \rightarrow PbCrO_4(s) + KNO_3(aq)$

13. Balance the equation
$(NH_4)_2Cr_2O_7(s) \rightarrow N_2(g) + H_2O(g) + Cr_2O_3(s)$

[1] [E]_____

[2] [C]_____

[3] [A]_____

[4] [C]_____

[5] [B]_____

[6] [A]_____

[7] [B]_____

[8] [A]_____

[9] [C]_____

[10] [A]_____

[11] [E]_____

[12] $Pb(NO_3)_2(aq) + K_2CrO_4(aq) \rightarrow PbCrO_4(s) + 2KNO_3(aq)$

[13] $(NH_4)_2Cr_2O_7(s) \rightarrow N_2(g) + 4H_2O(g) + Cr_2O_3(s)$