Balance the following redox reaction using the half-reaction method. Identify the oxidizing agent (OA), the reducing agent (RA), the element oxidized, and the element reduced.

Acidic Solution Problems

1. Ag + $NO_3^ \rightarrow$ Ag^+ + NO

Element Oxidized _____ Element Reduced ____ RA ____ OA ____

Correct Equation:

2. $C_2H_4 + MnO_4 \rightarrow Mn^{2+} + CO_2$

Element Oxidized _____ Element Reduced ____ RA ____ OA ____

3.
$$H_2S$$
 + I_2 \rightarrow S + I^-

Correct Equation:

4. $UF_6^- + H_2O_2 \rightarrow UO_2^{2+} + HF$

Element Oxidized _____ Element Reduced ____ RA ____ OA ____

Correct Equation:

5. $Fe^{2+} + MnO_4$ \rightarrow $Fe^{3+} + Mn^{2+}$

6.
$$PbO_2 + Cl^{-} \rightarrow Pb^{2+} + Cl_2$$

Element Oxidized _____ Element Reduced ____ RA ____ OA ____

Correct Equation:

7.
$$Cr_2O_7^{2-} + I^{-} \rightarrow Cr^{3+} + I_2$$

Element Oxidized _____ Element Reduced ____ RA ____ OA ____

Correct Equation:

8.
$$Fe^{2+} + Cr_2O_7^{2-} \rightarrow Fe^{3+} + Cr^{3+}$$

9.	I_2	+	H_3AsO_3	\rightarrow	I -	+	H ₃ AsO ₄				
Eleme	nt Oxi	dized		Elemen	t Redu	iced _		RA		OA	
Correct Equation:											
Basic Solution Problems											
10.	Br_2	\rightarrow	BrO ₃	Br -							
Eleme	nt Oxi	dized		Elemen	t Redu	iced _		RA		OA	
Correct Equation:											
11.	CN ⁻	+	MnO_4	\rightarrow	CNO)-	+ Mn	O_2			
Eleme	nt Oxi	dized		Elemen	t Redu	iced _		RA		OA	
Correct Equation:											

12.
$$\operatorname{CrO_4^{2-}} + \operatorname{HSnO_2^{-}} \rightarrow \operatorname{HSnO_3^{-}} + \operatorname{CrO_2^{-}}$$

Correct Equation:

13.
$$H_2O_2 + ClO_2 \rightarrow ClO_2 + O_2$$

Element Oxidized ____ Element Reduced ____ RA ___ OA ____

Correct Equation:

Neutral Solution Problems

14.
$$Fe^{3+} + I^{-} \rightarrow Fe^{2+} + I_{2}$$

Element Oxidized _____ Element Reduced ____ RA ____ OA ____