Word equations

1. For each of the following, write the correct skeleton equation, and then balance it:

Example: hydrogen gas + oxygen gas → water
$2\ H_2$ + O_2 → $2\ H_2O$

a) copper(II) oxide + hydrogen gas → copper + water
CuO + H_2 → Cu + H_2O

b) lead(II) nitrate + potassium iodide → lead(II) iodide + potassium nitrate
$Pb(NO_3)_2$ + $2\ KI$ → PbI_2 + $2\ KNO_3$

c) calcium + water → calcium hydroxide + hydrogen gas
Ca + $2\ H_2O$ → $Ca(OH)_2$ + H_2

d) lead(II) sulfide + oxygen → lead + sulfur dioxide
PbS + O_2 → Pb + SO_2

e) hydrogen sulfide → hydrogen gas + sulfur
H_2S → H_2 + S

2. For each of the following, write the word equation, then the skeleton equation and balance it:

Example: Hydrogen gas reacts with oxygen gas to produce liquid water.
Word: Hydrogen gas + oxygen gas → water
Chemical: $2\ H_2$ + O_2 → $2\ H_2O$

a) Lead(II) sulphate and magnesium bromide undergo a reaction to produce lead(II) bromide and magnesium sulphate.

Word: Lead (II) sulphate + magnesium bromide → lead (II) bromide + magnesium sulfate.

Chemical: $PbS + MgBr_2 \rightarrow PbBr_2 + MgS$

b) Calcium metal reacts with tin (IV) chloride to form calcium chloride and tin.

Word: Calcium + tin (IV) chloride → Calcium chloride + tin

Chemical: $2Ca + SnCl_4 \rightarrow 2CaCl_2 + Sn$