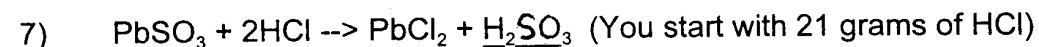
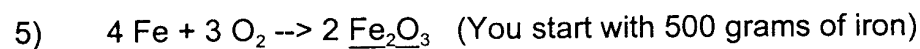
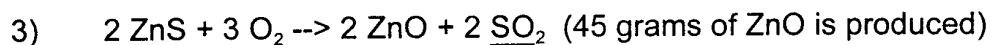
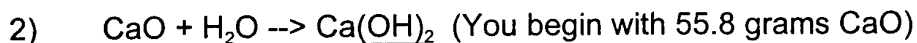
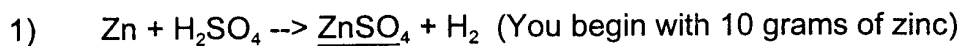


Stoichiometry Calculations

For the following questions, calculate how much of the indicated product is made. Show all your work.



Solutions to "Stoichiometry Calculations"

1.

10 g Zn	1 mol Zn	1 mol ZnSO ₄	161.46 g ZnSO ₄
	65.39 g Zn	1 mol Zn	1 mol ZnSO ₄

= 20 g ZnSO₄

2.

55.8 g CaO	1 mol CaO	1 mol Ca(OH) ₂	74.10 g Ca(OH) ₂
	56.08 g CaO	1 mol CaO	1 mol Ca(OH) ₂

= 73.7 g Ca(OH)₂

3.

45 g ZnO	1 mol ZnO	2 mol SO ₂	64.07 g SO ₂
	81.39 g ZnO	2 mol ZnO	1 mol SO ₂

= 35 g SO₂

4.

17.8 g HNO ₃	1 mol HNO ₃	1 mol Fe(OH) ₃	106.87 g Fe(OH) ₃
	80.04 g NH ₄ NO ₃	3 mol NH ₄ NO ₃	1 mol Fe(OH) ₃

= 7.92 g Fe(OH)₃

5.

500 g Fe	1 mol Fe	2 mol Fe ₂ O ₃	159.7 g Fe ₂ O ₃
	55.85 g Fe	4 mol Fe	1 mol Fe ₂ O ₃

= 700 g Fe₂O₃

6.

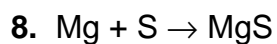
34 g MgBr ₂	1 mol MgBr ₂	2 mol NaBr	102.89 g NaBr
	184.11 g MgBr ₂	1 mol MgBr ₂	1 mol NaBr

= 38 g NaBr

7.

21 g HCl	1 mol HCl	1 mol H ₂ SO ₃	82.08 g H ₂ SO ₃
	36.46 g HCl	2 mol HCl	1 mol H ₂ SO ₃

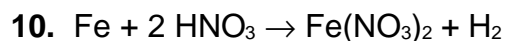
= 24 g H₂SO₃



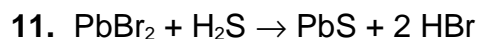
35.0 g Mg	1 mol Mg	1 mol MgS	56.38 g MgS	= 81.2 g MgS
	24.31 g Mg	1 mol Mg	1 mol MgS	



100 g HCl	1 mol HCl	1 mol $\text{Be}(\text{OH})_2$	43.03 g $\text{Be}(\text{OH})_2$	= 60 g $\text{Be}(\text{OH})_2$
	36.46 g HCl	2 mol HCl	1 mol $\text{Be}(\text{OH})_2$	



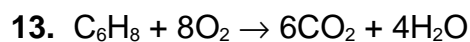
25 g Fe	1 mol Fe	1 mol $\text{Fe}(\text{NO}_3)_2$	179.84 g $\text{Fe}(\text{NO}_3)_2$	= 81 g $\text{Fe}(\text{NO}_3)_2$
	55.85 g Fe	1 mol Fe	1 mol $\text{Fe}(\text{NO}_3)_2$	



21.0 g PbBr_2	1 mol PbBr_2	1 mol PbS	239.3 g PbS	= 13.7 g PbS
	367.0 g $\text{Pb}(\text{Br})_2$	1 mol PbBr_2	1 mol PbS	



230 g Li	1 mol Li	2 mol LiCl	42.39 g LiCl	= 1400 g LiCl
	6.94 g Li	2 mol Li	1 mol LiCl	



23 g C_6H_8	1 mol C_6H_8	6 mol CO_2	44.01 g CO_2	= 76 g CO_2
	80.12 g C_6H_8	1 mol C_6H_8	1 mol CO_2	