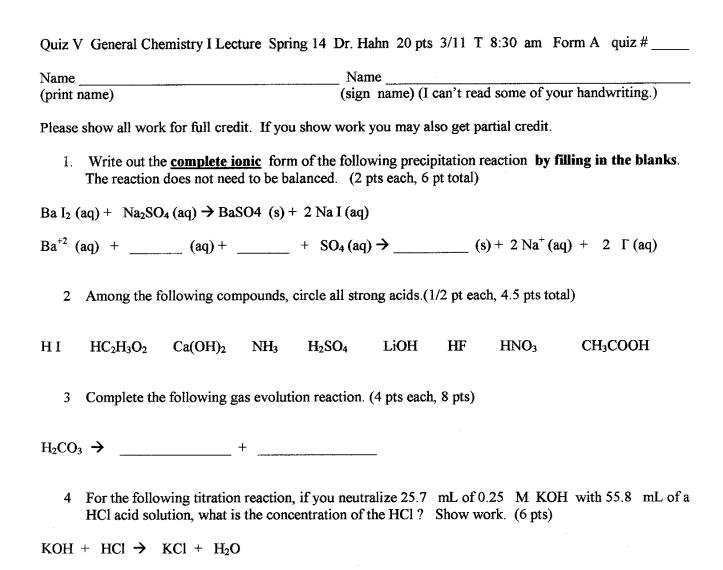
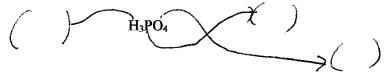
redit: What is the oxidation state of every atom in the following compound. (3 pts) (3)(1) + P + (-2)4 = 0  $(-2) \qquad P = -3 + 8 = +5$ 

Quiz V Gener	al Chemistry I Lectu	are Spring 14 Dr. Hahn 20 pts 3/11 T 8:30 am Form B quiz#
Name	tery	Name Name
(print name)	V	Name (sign name) (I can't read some of your handwriting.)
Please show all	work for full credit	t. If you show work you may also get partial credit.
1. Write on The rea	out the complete ion ction does not need	to be balanced. (2 pts each, 6 pt total)
		a CO <sub>3</sub> (s) + 2 Na OH(aq)
2Na <sup>+</sup> +	$\frac{-1}{2}$ (aq) + Ba <sup>+2</sup> (a	q) + 2 OH (aq) $\rightarrow$ Ba CO <sub>3</sub> (s) + $2 N_0$ (aq) + $2 O_H$ (aq)
2 Among	the following compo	ounds, circle all strong bases.(1/2 pt each, 4.5 pts total)
H I HC₂H₃(	$O_2$ $Ca(OH)_2$	NH <sub>3</sub> H <sub>2</sub> SO <sub>4</sub> LiOH HF HNO <sub>3</sub> CH <sub>3</sub> COOH
3 Complet	te the following gas	evolution reaction. (4 pts each, 8 pts)
NH4OH →	NH3 (g) +	420
For the fa HCl ac	ollowing titration re	eaction, if you neutralize 37.9 mL of 1.55 M KOH with 55.8 mL of the concentration of the HCl? Show work. (6 pts)
XOH + HCI -	→ KCl + H <sub>2</sub> O	
37,9me KOH	x 1,55 h	Tekou x Imal HU = 0,0589 molther
90ln 55,8	inl 4U 56	oln. x loone = 0,0558 0,0587mol = 1,051
Maci	d=?	Moase = 1.55m Mala= MbVb
Vaci	d= 55,8me	1/2 = 3/9 ml Ma = 1/6/2
Mo	= (1.85h	state of every atom in the following compound. (3 pts)
xtra Credit: W	hat is the oxidation?	state of every atom in the following compound. (3 pts)
	(+1)	K <sub>2</sub> CO <sub>3</sub> $(-2)$ $(4)$ $2(1)$ + $(2)$ = $(4)$
		C= -L + 6= TY

Quiz V General Chemistry I Lecture Spring 14 Dr. Hahn 20 pts 3/11 T 9:55 am Form A quiz #	sold
Please show all work for full credit. If you show work you may also get partial credit.  1. Complete the following molecular form of the precipitation reaction give the net ionic equation for the following reaction: (3 pts each, 6 pts)  MgCl <sub>2</sub> (aq) + Na <sub>2</sub> CO <sub>3</sub> (aq) → MgCO <sub>3</sub> (s) + 2 Na Cl (s)  MgCl <sub>2</sub> (aq) + Na <sub>2</sub> CO <sub>3</sub> (aq) → MgCO <sub>3</sub> (s)  2. Among the following compounds, circle all weak acids. (1/2 pt each, 4.5 pts total)  HI (HC <sub>2</sub> H <sub>3</sub> O <sub>3</sub> ) Ca(OH) <sub>2</sub> NH <sub>3</sub> H <sub>2</sub> SO <sub>4</sub> LiOH (HF) HNO <sub>3</sub> (Ph <sub>3</sub> COOID)  3 Complete the following acid base reaction. (4 pts each, 8 pts)  HNO <sub>3</sub> + K(H) → K NO <sub>2</sub> + H 2 D  For the following titration reaction if you neutralize a 1.5 M solution of HNO <sub>3</sub> of volume 250.0 mL with a 0.55 M NaOH solution, how many mL of NaOH do you need? Show work. (6 pts)  HNO <sub>3</sub> + Na OH → Na NO <sub>3</sub> + H <sub>2</sub> O  2 S O. O ml HNO <sub>3</sub> × (1 S mel HNO <sub>3</sub> × 1 mel	Quiz V General Chemistry I Lecture Spring 14 Dr. Hahn 20 pts 3/11 T 9:55 am Form A quiz#
Please show all work for full credit. If you show work you may also get partial credit.  1. Complete the following molecular form of the precipitation reaction give the net ionic equation for the following reaction: (3 pts each, 6 pts)  MgCl <sub>2</sub> (aq) + Na <sub>2</sub> CO <sub>3</sub> (aq) → MgCO <sub>3</sub> (s) + 2 Na Cl (s)  MgCl <sub>2</sub> (aq) + Na <sub>2</sub> CO <sub>3</sub> (aq) → MgCO <sub>3</sub> (s)  2. Among the following compounds, circle all weak acids. (1/2 pt each, 4.5 pts total)  HI (HC <sub>2</sub> H <sub>3</sub> O <sub>3</sub> ) Ca(OH) <sub>2</sub> NH <sub>3</sub> H <sub>2</sub> SO <sub>4</sub> LiOH (HF) HNO <sub>3</sub> (Ph <sub>3</sub> COOID)  3 Complete the following acid base reaction. (4 pts each, 8 pts)  HNO <sub>3</sub> + K(H) → K NO <sub>2</sub> + H 2 D  For the following titration reaction if you neutralize a 1.5 M solution of HNO <sub>3</sub> of volume 250.0 mL with a 0.55 M NaOH solution, how many mL of NaOH do you need? Show work. (6 pts)  HNO <sub>3</sub> + Na OH → Na NO <sub>3</sub> + H <sub>2</sub> O  2 S O. O ml HNO <sub>3</sub> × (1 S mel HNO <sub>3</sub> × 1 mel	Name Name
Please show all work for full credit. If you show work you may also get partial credit.  1. Complete the following molecular form of the precipitation reaction give the net ionic equation for the following reaction: (3 pts each, 6 pts)  MgCl <sub>2</sub> (aq) + Na <sub>2</sub> CO <sub>3</sub> (aq) → MgCO <sub>3</sub> (s) + 2 Na Cl (s)  MgCl <sub>2</sub> (aq) + Na <sub>2</sub> CO <sub>3</sub> (aq) → MgCO <sub>3</sub> (s)  2. Among the following compounds, circle all weak acids. (1/2 pt each, 4.5 pts total)  HI (HC <sub>2</sub> H <sub>3</sub> O <sub>3</sub> ) Ca(OH) <sub>2</sub> NH <sub>3</sub> H <sub>2</sub> SO <sub>4</sub> LiOH (HF) HNO <sub>3</sub> (Ph <sub>3</sub> COOID)  3 Complete the following acid base reaction. (4 pts each, 8 pts)  HNO <sub>3</sub> + K(H) → K NO <sub>2</sub> + H 2 D  For the following titration reaction if you neutralize a 1.5 M solution of HNO <sub>3</sub> of volume 250.0 mL with a 0.55 M NaOH solution, how many mL of NaOH do you need? Show work. (6 pts)  HNO <sub>3</sub> + Na OH → Na NO <sub>3</sub> + H <sub>2</sub> O  2 S O. O ml HNO <sub>3</sub> × (1 S mel HNO <sub>3</sub> × 1 mel	(print name) (Sign name) (I can't read some of your handwriting.)
the following reaction: (3 pts each, 6 pts) $MgCl_2(aq) + Na_2CO_3(aq) \rightarrow MgCO_3(s) + 2 Na Cl$ (s) $MgCl_2(aq) + Na_2CO_3(aq) \rightarrow MgCO_3(s)$ 2. Among the following compounds, circle all weak acids. (1/2 pt each, 4.5 pts total) $HI  HC_2H_3O_3  Ca(OH)_2  NH_3  H_2SO_4  LiOH  HF  HNO_3  CH_3COOH$ 3 Complete the following acid base reaction. (4 pts each, 8 pts) $H^3NO_3 + KOH \rightarrow K  NO_2 + H_2O$ $H^3NO_3 + KOH \rightarrow K  NO_3 + H_2O$ $H^3NO_3 + NaOH $ solution, how many mL of NaOH do you need? Show work. (6 pts) $H^3NO_3 + NaOH \rightarrow NaNO_3 + H_2O$ $H^3NO_3 + H_2$	
2. Among the following compounds, circle all weak acids. (1/2 pt each, 4.5 pts total)  HI $HC_2H_3O_3$ $Ca(OH)_2$ $NH_3$ $H_2SO_4$ $LiOH$ $HF$ $HNO_3$ $QH_3COOH$ 3 Complete the following acid base reaction. (4 pts each, 8 pts)  H) $NO_3$ + $KOH$ $\rightarrow$ $L$ $NO_2$ + $L$	<ol> <li>Complete the following molecular form of the precipitation reaction give the net ionic equation for the following reaction: (3 pts each, 6 pts)</li> </ol>
HI $HC_2H_3O_2$ $Ca(OH)_2$ $NH_3$ $H_2SO_4$ $LiOH$ $HF$ $HNO_3$ $M_3COOH$ 3 Complete the following acid base reaction. (4 pts each, 8 pts)  4 For the following titration reaction if you neutralize a 1.5 M solution of HNO <sub>3</sub> of volume 250.0 mL with a 0.55 M NaOH solution, how many mL of NaOH do you need? Show work. (6 pts)  H $NO_3$ + $Na$ $OH$ $\rightarrow$ $Na$ $NO_3$ + $H_2O$ 250.0 ml $HM_3$ $\sim$ $1000$ ml $HM_3$ $\sim$ $1000$ ml $\sim$	$\begin{array}{c} \text{MgCl}_2(\text{aq}) + \text{Na}_2\text{CO}_3(\text{aq}) \rightarrow \text{MgCO}_3(\text{s}) + 2 \text{Na Cl (s)} \\ & + 2 \text{MgCO}_3(\text{aq}) + 2 \text{MgCO}_3(\text{s}) \\ & + 2 \text{MgCO}_3(\text{s}) \end{array}$
Complete the following acid base reaction. (4 pts each, 8 pts)  For the following titration reaction if you neutralize a 1.5 M solution of HNO3 of volume 250.0 mL with a 0.55 M NaOH solution, how many mL of NaOH do you need? Show work. (6 pts)  H NO3 + Na OH $\Rightarrow$ Na NO3 + H2O  250.0 ml $\Rightarrow$ HNO3 + H2O  NaOH $\Rightarrow$ Na NO4 + H2O  NaOH $\Rightarrow$ Na NO5 +	2. Among the following compounds, circle all weak acids. (1/2 pt each, 4.5 pts total)
H)NO <sub>3</sub> + KOH $\rightarrow$ K $\rightarrow$ For the following titration reaction if you neutralize a 1.5 M solution of HNO <sub>3</sub> of volume 250.0 mL with a 0.55 M NaOH solution, how many mL of NaOH do you need? Show work. (6 pts)  H NO <sub>3</sub> + Na OH $\rightarrow$ Na NO <sub>3</sub> + H <sub>2</sub> O $ \begin{array}{cccccccccccccccccccccccccccccccccc$	H I HC <sub>2</sub> H <sub>3</sub> O <sub>2</sub> Ca(OH) <sub>2</sub> NH <sub>3</sub> H <sub>2</sub> SO <sub>4</sub> LiOH HF HNO <sub>3</sub> CH <sub>3</sub> COOH
For the following titration reaction if you neutralize a 1.5 M solution of HNO <sub>3</sub> of volume 250.0 mL with a 0.55 M NaOH solution, how many mL of NaOH do you need? Show work. (6 pts)  HNO <sub>3</sub> + Na OH $\rightarrow$ Na NO <sub>3</sub> + H <sub>2</sub> O  250.0 ml $\mu$	Complete the following acid base reaction. (4 pts each, 8 pts)
with a 0.55 M NaOH solution, how many mL of NaOH do you need? Show work. (6 pts)  HNO3 + Na OH $\rightarrow$ Na NO3 + H <sub>2</sub> O  250,0 ml $\downarrow MNO_3 \times 1$ $\downarrow Male \times$	H)NO3 + KOH) + KOH) + H20
methods 681,8 m (KOH (2 sig Fig) KOH  Macid = 1.5 m HNDz Mrase = 0,55 m NaOH  Vacid = 250.0 me V base = ?  Ma Va = Mb Vb - ) V base = Ma Va	For the following titration reaction if you neutralize a 1.5 M solution of HNO <sub>3</sub> of volume 250.0 mL with a 0.55 M NaOH solution, how many mL of NaOH do you need? Show work. (6 pts)
Macid = 1.5 m HN/z $M_{base} = 0.55 m Na04$ $Vacid = 250.0 me$ $V_{base} = ?$ $Ma Va = M_b V_b \rightarrow V_{base} = \frac{MaV_a}{M_b}$ $V_{base} = \frac{(I.5m)(250.0 me)}{(0.55m)} = 681.8 m($	HNO3 + Na OH > Na NO3 + H2O  250,0 ml HNO3 X 1,5 mel HNO3 X 1 mol x 1000 ml =  501n 1000 ml HNO3 I molyno3 0.55 mol =  Melhod 1 681,8 ml (04 (2 sig fig) KOH
Vacid = 250.0 me V base = ?  Ma Va = $M_b V_b \rightarrow V_b ase = \frac{M_a V_a}{M_b}$ V base = $\frac{(I.Sm)(250.0 me)}{(0.55m)} = 681.8 m$	Macid = 1.5 m HND3 Mbase = 0,55m NaO4
$ma Va = mbVb \rightarrow Vbase = mb$ $Vbase = \frac{(15m)(250.0ml)}{(0.55m)} = 681.8 m$	Vacid = 250,0 me V base = ?
V base = (1.5m)(250.0ml) = 681.8 m(	ma Va = mb Vb - + Vbase = mb
(3/1)/3/11/45+3(-1)=0	$V_{base} = \frac{(I.Sm)(250.0ml)}{(0.55m)} = 681.8 m($ $0.4+0+5+3(-2)=0$
Extra Credit: What is the oxidation state of every atom in the following compound. (3 pts)	

Quiz V General (	Chemistry I Lecture Sp.	Spring 14 Dr. Hahn 20 pts 3/11 T 9:55 am Form B quiz#						
Name	Key	Name						
(print name)	' 0	Name (sign_name) (I can't read some of your handwriting.)						
Please show all work for full credit. If you show work you may also get partial credit.								
Complete the following	1. Complete the following molecular form of the precipitation reaction give the net ionic equation for the following reaction: (3 pts each, 6 pts)							
$Pb(NO_3)_2(aq) + 2$	Na I (aq) $\rightarrow$ PbI <sub>2</sub> (s) +	+ 2 Na NO <sub>3</sub> (s)						
$Pb^{+2}(aq) + 2J$	$(aq) \rightarrow Pb^{I}$	$I_{2}$ (s)						
2 Among the	following compounds,	ls, circle all weak bases (1/2 pt each, 4.5 pts total)						
HI HC <sub>2</sub> H <sub>3</sub> O <sub>2</sub>	Ca(OH) <sub>2</sub> NH <sub>3</sub>	H <sub>2</sub> SO <sub>4</sub> LiOH HF HNO <sub>3</sub> CH <sub>3</sub> COOH						
3 Complete t	he following acid base	e reaction. (4 pts each, 8 pts)						
HCl + LiOH <del>-)</del>	Lill	<u>+ 160</u>						
For the following titration reaction if you neutralize a 0.250 M solution of HNO <sub>3</sub> of volume 73.7 mL with a 1.02 M NaOH solution, how many mL of NaOH do you need? Show work. (6 pts)								
H NO <sub>3</sub> + Na OH	$\rightarrow$ Na NO <sub>3</sub> + H <sub>2</sub> O	$\leq c/c$						
melhoe	<u> 21</u>	Naoy						
23.2 ml	0.250m	not HAUZ x Ind NaUH x 1000ml						
Halz	(000m	mol HAD3 x Impl NaOH x 1000ml oln HAD3 NaOH NaOH						
Soln	70	oln HM3 Nagy						
- 10	1 1 10 10 10 19	9 <del>-7-</del>						
melt	1002	mava = mbvb						
mac	1=0.250 m	n M base = 1,02m 1/ m 1/						
1/00	1 = 73,7 ml	$l$ $V_{base} = ? b = \frac{m_a v_a}{m}$						
V OLCI	(0.250m)	18/ml 18/ml 10.00						
V b =	(10 m)	The state of the s						
Method 2 $macid = 0.250 \text{ m} \text{ masse} = 1.02 \text{ m} \text{ Na Va} = m_b V_b$ $macid = 0.250 \text{ m} \text{ masse} = 1.02 \text{ m} \text{ Na Va}$ $macid = 0.250 \text{ m} \text{ masse} = 1.02 \text{ m} \text{ Na Va}$ $macid = 0.250 \text{ m} \text{ masse} = 1.02 \text{ m} \text{ Na Va}$ $macid = 0.250 \text{ m} \text{ masse} = 1.02 \text{ m} \text{ Na Va}$ $macid = m_b V_b$								
	(+1)	NaNO <sub>3</sub> (-2) (+5) $N = +6$ $N = +5$						
		N = +5						





Quiz V General Chemistry I Lecture Spring	g 14 Dr. Hahn 20 pts 3/11 T 8:30 am Form B quiz #					
Name	Name					
(print name)	Name (sign_name) (I can't read some of your handwriting.)					
Please show all work for full credit. If you s	how work you may also get partial credit.					
1. Write out the <u>complete ionic</u> form of the following precipitation reaction by filling in the blanks. The reaction does not need to be balanced. (2 pts each, 6 pt total)						
$Na_2 CO_3 (aq) + Ba (OH)_2(aq) \rightarrow Ba CO_3(s)$	+ 2 Na OH(aq)					
	· (····D)					
$2Na^{+} + \underline{\qquad} (aq) + Ba^{+2}(aq) + 2 O$	$H^{-}(aq) \rightarrow Ba CO_{3}(s) + \underline{\qquad} (aq) + \underline{\qquad} (aq)$					
2 Among the following compounds, circle all strong bases.(1/2 pt each, 4.5 pts total)						
H I $HC_2H_3O_2$ $Ca(OH)_2$ $NH_3$ ]	H <sub>2</sub> SO <sub>4</sub> LiOH HF HNO <sub>3</sub> CH <sub>3</sub> COOH					
3 Complete the following gas evolution	reaction. (4 pts each, 8 pts)					
NH₄OH → +						
For the following titration reaction, if you neutralize 37.9 mL of 1.55 M KOH with 55.8 mL of a HCl acid solution, what is the concentration of the HCl? Show work. (6 pts)						
KOH + HCl → KCl + H <sub>2</sub> O						

K₂ÇO₃

Quiz V General Chemistry I Lecture Spring 14 Dr. Hahn 20 pts 3/11 T 9:55 am Form A quiz #
NameName
Name Name (print name) (sign name) (I can't read some of your handwriting.)
Please show all work for full credit. If you show work you may also get partial credit.
1. Complete the following molecular form of the precipitation reaction give the net ionic equation for the following reaction: (3 pts each, 6 pts)
$MgCl_2(aq) + Na_2CO_3(aq) \rightarrow MgCO_3(s) + 2 Na Cl (s)$
$\underline{\hspace{1cm}}$ (aq) + $\underline{\hspace{1cm}}$ (aq) $\Rightarrow$ MgCO <sub>3</sub> (s)
2. Among the following compounds, circle all weak acids.(1/2 pt each, 4.5 pts total)
H I HC <sub>2</sub> H <sub>3</sub> O <sub>2</sub> Ca(OH) <sub>2</sub> NH <sub>3</sub> H <sub>2</sub> SO <sub>4</sub> LiOH HF HNO <sub>3</sub> CH <sub>3</sub> COOH
3 Complete the following acid base reaction. (4 pts each, 8 pts)
H NO <sub>3</sub> + KOH → +
For the following titration reaction if you neutralize a 1.5 M solution of HNO <sub>3</sub> of volume 250.0 mL with a 0.55 M NaOH solution, how many mL of NaOH do you need? Show work. (6 pts)
$H NO_3 + Na OH \rightarrow Na NO_3 + H_2O$

H<sub>2</sub>SO<sub>3</sub> (

Name	Naı	me					
(print name)	ameName						
Please show all work for full credit.	If you show work	you may also	get partial credit.				
Complete the following mole the following reaction: (3 pts		precipitation re	eaction give the no	et ionic equation for			
$Pb(NO_3)_2(aq) + 2 Na I(aq) \rightarrow PbI_2$	(s) + 2 Na NO <sub>3</sub>	(s)					
$Pb^{+2} (aq) + \underline{\qquad} (aq) \rightarrow \underline{\qquad}$	(s)						
2 Among the following compo	unds, circle all wea	ak bases.(1/2 p	ot each, 4.5 pts tot	al)			
H I $HC_2H_3O_2$ $Ca(OH)_2$ N	NH <sub>3</sub> H <sub>2</sub> SO <sub>4</sub>	LiOH I	HF HNO <sub>3</sub>	СН₃СООН			
3 Complete the following acid	base reaction. (4 p	ts each, 8 pts)					
HCl + LiOH→	+						
For the following titration reamL with a 1.02 M NaOH solution,	action if you neutra how many mL of N	lize a 0.250 N IaOH do you i	A solution of HNO need? Show work	O <sub>3</sub> of volume 73.7 x. (6 pts)			
$H NO_3 + Na OH \rightarrow Na NO_3 + H$	$ m H_2O$						

NaNO<sub>3</sub>