

EENS_212 Petrology
Ternary Phase Diagram Practice Exercise

1. For the system X-Y-Z on the next page
 - a. Label the liquidus fields.
 - b. Trace the crystallization histories for the following compositions:

Composition a	Composition b
Composition c	Composition d
Composition e	Composition f
Composition h	Composition i

- c. Give the proportions of all phases present in composition g at 780° .
- d. Give the composition of all phases present in composition a at 850° .
- e. Give the proportions of all phases present in composition d at 800° .
- f. Give the proportions of all phases present in composition c at 900° .
- g. Give the composition of all phases present in composition h at 1000° .
- h. Give the composition and proportion of all phases present in composition b at 800° .

- i. At what temperature do the following compositions begin to melt?

k?	g?	a?	b?	h?	f?
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- j. What is the composition of the first liquid to form when melting composition i?
- k. What is the composition of the first liquid to form when melting composition b?
- l. What is the composition of the first liquid to form when melting composition g?

