## **Binary Operations - Guided Lesson**

Complete the following problems:

1)

6	Α	В	С	D
Α	В	Α	D	С
В	Α	В	С	D
С	D	С	Α	В
D	С	D	В	Α

- a. Is this operation commutative?
- b. Name the identity element, or explain why none exists.
- c. For each element having an inverse, name the element and its inverse.

2)

		X	P	P
	*	X	All S	P
X	P	The second second	X	7
P		*	P	X
	X	P		

- a. Is this operation commutative?
- b. Name the identity element, or explain why none exists.
- c. For each element having an inverse, name the element and its inverse.

3)

7	k	е	у	S
k	S	k	е	У
е	k	е	У	S
У	е	У	S	k
S	У	S	k	е

- a. Is this operation commutative?
- b. Name the identity element, or explain why none exists.
- c. For each element having an inverse, name the element and its inverse.