

## Properties and Operations

Operation  $\diamond$  is defined as follows:

$\diamond$	A	B	C	D
A	D	A	B	C
B	A	B	C	D
C	B	C	D	A
D	C	D	A	B

1. Questions about Operation  $\diamond$ 
  - a) Find  $B \diamond C$
  - b) Find  $D \diamond D$
  - c) Find  $C \diamond B$
  - d) Find  $A \diamond C$
2. Is operation  $\diamond$  commutative? How do you know?
3. Is there an identity element for operation  $\diamond$ ? Show how you know.
4. Is there an inverse for A? How do you know?