AI. **Associative law** for addition

A2. Zero element for addition (**Identity** element)

A3. **Inverse** element for addition (Additive inverse)

A4. **Commutative law** for addition

M1: Associative law for multiplication

M2. Unit element for multiplication (Identity element)

M3. Inverse element for multiplication (Multiplicative inverse)

M4. Commutative law for multiplication

D1. **Distributive law**: Multiplication over addition.

D2. Distributive law: Addition over multiplication.

Single Operator:

Semigroup: M1 or A1

Monoid: Semigroup + M2 or A2

Group: Monoid + A3 or M3

Commutative Group/Abelian Group – Group + A4 or M4

Two operators:

Ring – A1, A2, A3, A4, M1, D1, D2

Commutative ring – Ring + M4

Ring with identity – Ring + M2

Field – Ring + M2 + M3 +M4