

Set systems

	π -system	semialgebra	algebra	σ -algebra
Contains \emptyset	—	✓	✓	✓
Complements	—	—	✓	✓
Complements are finite disjoint unions	—	✓	✓	✓
Finite unions	—	—	✓	✓
Countable unions	—	—	—	✓
Finite intersections	✓	✓	✓	✓
Countable intersections	—	—	—	✓

✓ = true by definition

✓ = follows from definition

A λ -system:

- contains \emptyset
- is closed under complements
- is closed under countable *disjoint* unions