```
@abstractmethod
def is_irreflexive(self, fr: FiniteRelation) -> bool:
  """ Return True if the relation is irreflexive
@abstractmethod
def is_transitive(self, fr: FiniteRelation) -> bool:
  """ Return True if the relation is transitive.
@abstractmethod
def is symmetric(self. fr: FiniteRelation) -> bool:
  """ Return True if the relation is symmetric
@abstractmethod
def is_antisymmetric(self, fr: FiniteRelation) -> bool:
  """ Return True if the relation is antisymmetric
@abstractmethod
def is_asymmetric(self, fr: FiniteRelation) -> bool:
  """ Return True if the relation is asymmetric
```

def is\_reflexive(self, fr: FiniteRelation) -> bool:
 """ Return True if the relation is reflexive. """

class FiniteEndorelationProperties(ABC):

@abstractmethod