

$$1. \text{Director} \subseteq \text{Person} \cap \exists \text{worksFor.Organization}$$

A director is a person and works for some organization.

$$2. \text{BasketballFan} \subseteq \text{Person} \cap \text{like.Basketball}$$

A BasketballFan is a person and likes Basketball.

$$3. \text{ScienceStudent} \equiv \text{student} \cap \exists \text{hasMajor.Science}$$

A science student is a student who has major science.

$$4. \text{SwimmingFan} \subseteq \text{Person} \cap \text{PeopleWithHobby}$$

A SwimmingFan is a person and has hobby.

$$5. \text{BaseballFan} \subseteq \text{Person} \cap \text{like.Baseball}$$

A BaseballFan is a person and likes baseball.

$$6. \text{'software program'} \subseteq \text{article} \subseteq \text{publication}$$

A software program is an article and publication.

$$7. \text{chair} \subseteq \text{person} \cap \exists \text{worksFor.Organization}$$

A chair is a person and works for some organization.

$$8. \text{Man} \cup \text{Woman} \subseteq \text{person}$$

Man or woman is person.

$$9. \text{BasketballFan} \cup \text{BaseballFan} \cup \text{SwimmingFan} \subseteq \text{PeopleWithHobby}$$

BasketballFan , baseballFan and swimmingFan is the people who has hobby.

$$10. \text{Man} \cap \text{Woman} \subseteq \emptyset$$

It doesn't exist a person is a man and woman in the same time.