

Additional Exercises for Chapter 2

Given the following signature

$$\mathcal{O} = \{a, b\}$$

$$\mathcal{F} = \{\}$$

$$\mathcal{P} = \{p, q\}$$

$$\mathcal{V} = \{X\}$$

find the answer sets (if any) for the following ASP programs:

1. $p(a).$
 $q(b).$
 $q(X) \leftarrow p(X).$
2. $p(a).$
 $p(b).$
 $q(X) \leftarrow p(X).$
3. $p(a) \text{ or } p(b).$
 $q(X) \leftarrow p(X).$
4. $p(a) \text{ or } \neg p(b).$
 $q(X) \leftarrow p(X).$
5. $p(a).$
 $p(b).$
 $q(X) \leftarrow p(X).$
 $\leftarrow q(a).$
6. $p(a) \text{ or } p(b).$
 $q(X) \leftarrow p(X).$
 $\leftarrow q(a).$
7. $p(a) \text{ or } p(b).$
 $p(a) \leftarrow p(b).$