Worksheet 7

Answers

Exercise 7.1 *Conversion to CFL*

1. $\neg p(X,Y) \vee q(X,Y)$
2. $q(X,Y) \vee \neg p(X,Y)$
3. $\neg p(X,Y) \vee \neg q(X,Y) \vee r(X,Y)$
4. $\neg p(X,Y) \vee \neg q(X,Y) \vee r(X,Y)$
5. $\neg p(X,Y) \vee q(X,Y) \vee r(X,Y)$
6. $\neg p(X_1,Y_1) \vee q(X_1,Y_1)$,
   $\neg p(X_2,Y_2) \vee r(X_2,Y_2)$
7. $\neg p(X_1,Y_1) \vee r(X_1,Y_1)$
   $\neg q(X_2,Y_2) \vee r(X_2,Y_2)$
8. $\neg p(X, f(X)) \vee q(X, f(X))$
   (where f is the Skolem function introduced)
9. $p(c, Y_1)$,
   $\neg\ q(c, Y_2)$
   (where c is the Skolem constant)
10. $p(X) \vee p(a)$
    (where a is the Skolem constant)

N.B. In exam answers, you would show your working too.