1st Assignment

1. Decide, which formulae defines a function:

   (a) $x = \tan y$

   (b) $4x^2 - y^2 = 2$

   (c) $-\sqrt{4x^2 - 2} = y$

   (d) $|y| = |x|$

   (e) $y = -\text{sgn}x$

   (f) $y = \arctan x$

2. Find the negation of following statements:

   (a) The sun sets in the East.

   (b) I like basketball but not tennis.

   (c) Some continuous functions are polynomials.

   (d) Number 92 has at most 5 divisors.

   (e) Bob comes to the party if and only if Eva comes.

3. (a) Find a sentence, which is not a statement.

   (b) Find a statement, which is an implication. Then negate it.

   (c) Find a statement, which is a conjunction. Then negate it.