Logic Programming: Small exercises

Write PROLOG programs for the following problems:

Exercise

1. Define the Factorial (i.e. fact(n) = 1 * 2 * 3 * … * (n-1) * n)

2. The Fibonacci sequence f(1), f(2), f(3),.. is: 1, 1, 2, 3, 5, 8, 13, 21, 34, 55..... As you see the definition is easy to grasp:
   f(1) = f(2)= 1
   f(n) = f(n-2) + f(n-1), if n >= 3

3. Write rules which finds a path in a graph

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arc(a,b).       arc(b,c).
arc(a,c).       arc(a,d).
arc(b,e).       arc(e,f).
arc(b,f).       arc(f,g).
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4. Compute the Maximum of two numbers X and Y.

5. Compute the absolute value of a number X.