1

4

```
a) \frac{1}{2} \cdot \sqrt{5}
b) \forall x \in X, \exists y \le \epsilon
c) (p \to q) \land (p \to r) \vdash p \to q \land r
d) \cos(2\theta) = \cos^2(\theta) - \sin^2(\theta)
e) k_{k+1} = n^2 + k_n^2 - k_{n-1}
     Am, n = \begin{bmatrix} a_{1,1} & a_{1,2} & \dots & a_{1,n} \\ a_{2,1} & a_{2,2} & \dots & a_{2,n} \\ \vdots & \vdots & \ddots & \vdots \\ a_{m,1} & a_{m,2} & \dots & a_{m,n} \end{bmatrix}
               let timer = new System.Diagnostics.Stopwatch()
2
                 timer.Start()
3
                 let returnValue = f()
                 printfn "Elapsed Time: %i" timer.
                          {\tt ElapsedMilliseconds}
              returnValue
```