RNA Processing

Order of hnRNA Processing in Eukaryotes

1. Cap (Required)
   - Guanine (sometimes Adenine) Cap is added (backwards) to 5’ end.
   - 5’-5’ connection
   - methylated

2. Polyadenylation of 3’ end (Required)
   - 3’ end cut off (hairpin)
   - Not coded on the DNA
   - ~ 200 A-bases
   - poly(A)-binding protein (PABP) attached every 10-20 bases

3. Introns are spliced out
   - Spontaneous
   - snRNA-mediated

4. mRNA transported to the cytoplasm (Required)
Initiation of Translation

1. Unknown, but related to:
   - Cap Proteins
   - PABP
   - Usually the first AUG after the CAP
   - Usually within 40 bases of CAP, but some genes have AUG >1000 bases from CAP
   - Optimal Context is GCC(AG)CC\text{AUGG}