```
                                 (((((((.(((((.....)))))((.(.(((((.......)))))).).)).........((
chr-3D.trna8-Ile-AAT     GGCCCAU-UAGCUCAGUUGGUUAGUGCGUGGUGCUAAUAACGCCAAGGUC--------GC 51
chr-3D.trna7-Ile-AAT     GGCCCAU-UAGCUCAGUUGGUUAGUGCGUGGUGCUAAUAACGCCAAGGUC--------GC 51
chr-2A.trna5-Ile-AAT     GGCCUAU-UAGCUCAGUUGGUUAGAGCGUCGUGCUAAUAACGCGAAGGUC--------GC 51
chr-2C.trna126-Ile-AAT   GGCCUAU-UAACUCAGUUGGUUAGAGCGUCGUGCUAAUAACGCGAAGGUC--------GC 51
chr-2A.trna87-Ile-AAT    GGCCUAU-UAGCUCAGUUGGUUAGAGCGUCGUGCUAAUAACGCGAAGGUC--------GC 51
chr-7D.trna64-Ile-AAT    GGCCUAU-UAGCUCAGUUGGUUAGAGCGUCGUGCUAAUAACGCGAAGGUC--------GC 51
chr-7D.trna35-Ile-AAT    GGCCUAU-UAGCUCAGUUGGUUAGAGCGUCGUGCUAAUAACGCGAAGGUC--------GC 51
chr-7D.trna34-Ile-AAT    GGCCUAU-UAGCUCAGUUGGUUAGAGCGUCGUGCUAAUAACGCGAAGGUC--------GC 51
chr-7D.trna32-Ile-AAT    GGCCUAU-UAGCUCAGUUGGUUAGAGCGUCGUGCUAAUAACGCGAAGGUC--------GC 51
chr-2A.trna98-Ile-AAT    GGCCUAU-UAGCUCAGUUGGUUAGAGCGUCGUGCUAAUAACGCGAAGGUC--------GC 51
chr-2B.trna89-Ile-AAT    GGCCUAU-UAGCUCAGUUGGUUAGAGCGUCGUGCUAAUAACGCGAAGGUC--------GC 51
chr-7C.trna12-Ile-AAT    GGCCUAU-UAGCUCAGUUGGUUAGAGCGUCGUGCUAAUAACGCGAAGGUC--------GC 51
chr-2B.trna104-Ile-AAT   GGCCUAU-UAGCUCAGUUGGUUAGAGCGUCGUGCUAAUAACGCGAAGGUC--------GC 51
chr-7B.trna39-Ile-AAT    GGCCUAU-UAGCUCAGUUGGUUAGAGCGUCGUGCUAAUAACGCGAAGGUC--------GC 51
chr-7A.trna93-Ile-AAT    GGCCUAU-UAGCUCAGUUGGUUAGAGCGUCGUGCUAAUAACGCGAAGGUC--------GC 51
chr-7A.trna17-Ile-AAT    GGCCUAU-UAGCUCAGUUGGUUAGAGCGUCGUGCUAAUAACGCGAAGGUC--------GC 51
chr-6D.trna79-Ile-AAT    GGCCUAU-UAGCUCAGUUGGUUAGAGCGUCGUGCUAAUAACGCGAAGGUC--------GC 51
chr-6D.trna51-Ile-AAT    GGCCUAU-UAGCUCAGUUGGUUAGAGCGUCGUGCUAAUAACGCGAAGGUC--------GC 51
chr-2C.trna16-Ile-AAT    GGCCUAU-UAGCUCAGUUGGUUAGAGCGUCGUGCUAAUAACGCGAAGGUC--------GC 51
chr-6C.trna50-Ile-AAT    GGCCUAU-UAGCUCAGUUGGUUAGAGCGUCGUGCUAAUAACGCGAAGGUC--------GC 51
chr-6C.trna13-Ile-AAT    GGCCUAU-UAGCUCAGUUGGUUAGAGCGUCGUGCUAAUAACGCGAAGGUC--------GC 51
chr-8B.trna24-Ile-AAT    GGCCUAU-UAGCUCAGUUGGUUAGAGCGUCGUGCUAAUAACGCGAAGGUC--------GC 51
chr-6B.trna78-Ile-AAT    GGCCUAU-UAGCUCAGUUGGUUAGAGCGUCGUGCUAAUAACGCGAAGGUC--------GC 51
chr-6B.trna55-Ile-AAT    GGCCUAU-UAGCUCAGUUGGUUAGAGCGUCGUGCUAAUAACGCGAAGGUC--------GC 51
chr-6B.trna3-Ile-AAT     GGCCUAU-UAGCUCAGUUGGUUAGAGCGUCGUGCUAAUAACGCGAAGGUC--------GC 51
chr-6A.trna79-Ile-AAT    GGCCUAU-UAGCUCAGUUGGUUAGAGCGUCGUGCUAAUAACGCGAAGGUC--------GC 51
chr-6A.trna77-Ile-AAT    GGCCUAU-UAGCUCAGUUGGUUAGAGCGUCGUGCUAAUAACGCGAAGGUC--------GC 51
chr-2C.trna127-Ile-AAT   GGCCUAU-UAGCUCAGUUGGUUAGAGCGUCGUGCUAAUAACGCGAAGGUC--------GC 51
chr-5D.trna15-Ile-AAT    GGCCUAU-UAGCUCAGUUGGUUAGAGCGUCGUGCUAAUAACGCGAAGGUC--------GC 51
chr-5D.trna11-Ile-AAT    GGCCUAU-UAGCUCAGUUGGUUAGAGCGUCGUGCUAAUAACGCGAAGGUC--------GC 51
chr-2D.trna96-Ile-AAT    GGCCUAU-UAGCUCAGUUGGUUAGAGCGUCGUGCUAAUAACGCGAAGGUC--------GC 51
chr-5C.trna54-Ile-AAT    GGCCUAU-UAGCUCAGUUGGUUAGAGCGUCGUGCUAAUAACGCGAAGGUC--------GC 51
chr-5C.trna16-Ile-AAT    GGCCUAU-UAGCUCAGUUGGUUAGAGCGUCGUGCUAAUAACGCGAAGGUC--------GC 51
chr-5C.trna15-Ile-AAT    GGCCUAU-UAGCUCAGUUGGUUAGAGCGUCGUGCUAAUAACGCGAAGGUC--------GC 51
chr-5C.trna14-Ile-AAT    GGCCUAU-UAGCUCAGUUGGUUAGAGCGUCGUGCUAAUAACGCGAAGGUC--------GC 51
chr-5C.trna13-Ile-AAT    GGCCUAU-UAGCUCAGUUGGUUAGAGCGUCGUGCUAAUAACGCGAAGGUC--------GC 51
chr-5B.trna64-Ile-AAT    GGCCUAU-UAGCUCAGUUGGUUAGAGCGUCGUGCUAAUAACGCGAAGGUC--------GC 51
chr-5B.trna31-Ile-AAT    GGCCUAU-UAGCUCAGUUGGUUAGAGCGUCGUGCUAAUAACGCGAAGGUC--------GC 51
chr-5B.trna9-Ile-AAT     GGCCUAU-UAGCUCAGUUGGUUAGAGCGUCGUGCUAAUAACGCGAAGGUC--------GC 51
chr-5A.trna58-Ile-AAT    GGCCUAU-UAGCUCAGUUGGUUAGAGCGUCGUGCUAAUAACGCGAAGGUC--------GC 51
chr-5A.trna45-Ile-AAT    GGCCUAU-UAGCUCAGUUGGUUAGAGCGUCGUGCUAAUAACGCGAAGGUC--------GC 51
chr-5A.trna42-Ile-AAT    GGCCUAU-UAGCUCAGUUGGUUAGAGCGUCGUGCUAAUAACGCGAAGGUC--------GC 51
chr-5A.trna11-Ile-AAT    GGCCUAU-UAGCUCAGUUGGUUAGAGCGUCGUGCUAAUAACGCGAAGGUC--------GC 51
chr-5A.trna8-Ile-AAT     GGCCUAU-UAGCUCAGUUGGUUAGAGCGUCGUGCUAAUAACGCGAAGGUC--------GC 51
chr-5A.trna7-Ile-AAT     GGCCUAU-UAGCUCAGUUGGUUAGAGCGUCGUGCUAAUAACGCGAAGGUC--------GC 51
chr-4D.trna68-Ile-AAT    GGCCUAU-UAGCUCAGUUGGUUAGAGCGUCGUGCUAAUAACGCGAAGGUC--------GC 51
chr-4C.trna17-Ile-AAT    GGCCUAU-UAGCUCAGUUGGUUAGAGCGUCGUGCUAAUAACGCGAAGGUC--------GC 51
chr-2D.trna112-Ile-AAT   GGCCUAU-UAGCUCAGUUGGUUAGAGCGUCGUGCUAAUAACGCGAAGGUC--------GC 51
chr-4A.trna56-Ile-AAT    GGCCUAU-UAGCUCAGUUGGUUAGAGCGUCGUGCUAAUAACGCGAAGGUC--------GC 51
chr-3A.trna45-Ile-AAT    GGCCUAU-UAGCUCAGUUGGUUAGAGCGUCGUGCUAAUAACGCGAAGGUC--------GC 51
chr-3D.trna51-Ile-AAT    GGCCUAU-UAGCUCAGUUGGUUAGAGCGUCGUGCUAAUAACGCGAAGGUC--------GC 51
chr-3B.trna16-Ile-AAT    GGCCUAU-UAGCUCAGUUGGUUAGAGCGUCGUGCUAAUAACGCGAAGGUC--------GC 51
chr-3C.trna58-Ile-AAT    GGCCUAU-UAGCUCAGUUGGUUAGAGCGUCGUGCUAAUAACGCGAAGGUC--------GC 51
chr-3A.trna2-Ile-AAT     GGCCCAU-UAGCUCAGUUGGUUAGAGCGUGGUGCUAAUAACGCCAAGGUC--------GC 51
chr-3C.trna13-Ile-AAT    GGCCCAU-UAGCUCAGUUGGUUAGAGCGUGGUGCUAAUAACGCCAAGGUC--------GC 51
chr-5D.trna10-Ile-AAT    GGCCUAU-UAGCUCAGUUGGUUAGAGCGUCGUGCUAAUAACGCGAAGGUC--------GC 51
chr-2A.trna84-Ile-AAT    GGCCUAU-UAGCUCAGCUGGUUAGAGCGUCGUGCUAAUAACGCGAAGGUC--------GC 51
chr-2B.trna12-Ile-AAT    GGCCUAU-UAGCUCAGCUGGUUAGAGCGUCGUGCUAAUAACGCGAAGGUC--------GC 51
chr-2C.trna18-Ile-AAT    GGCCUAU-UAGCUCAGCUGGUUAGAGCGUCGUGCUAAUAACGCGAAGGUC--------GC 51
chr-2D.trna11-Ile-AAT    GGCCUAU-UAGCUCAGCUGGUUAGAGCGUCGUGCUAAUAACGCGAAGGCC--------GC 51
chr-3D.trna70-Ile-AAT    GGCCCAU-UAGCUCAGUUGGUUACAGCGUGGUGCUAAUAACGCCAAGGUC--------GC 51
chr-6C.trna3-Ile-AAT     GGCCUAU-UAGCUCAGUUGGUUACAGCGUCGUGCUAAUAACGCGAAGGUC--------GC 51
chr-4B.trna15-Ile-AAT    UGCCUAU-UAGCUCAGUUGGUUUGAGCGUUGUGCUAAUAACGCGAAGGUC--------GC 51
chr-6D.trna7-Ile-AAT     GGCCUAU-UAGCUCGGUUGGUUAGAGCGUCGUGCUAAUAACGCGAAGGUC--------GC 51
chr-7C.trna47-Ile-AAT    GGCCUAU-UAGCUCAGUUGGUUAGAGCGUCGUGCUAAUAACACGAAGGUA--------GC 51
chr-7C.trna46-Ile-AAT    GGCCUAU-UAGCUCAGUUGGUUAGAGCGUCGUGCUAAUAACGCGAAGGUC--------GC 51
chr-7B.trna52-Ile-AAT    GGCCUAU-UAGCUCAGUUGGUUAGAGCGUCGUGCUAAUAACGCGAAGGUCGCAGGGUAGC 59
chr-6A.trna75-Ile-AAT    UUGCCUAUUAGUUCAGUUGGUUAGAGCGUCGUGCUAAUAACGCAAAGAU---------CG 51
                                 .........10........20........30........40........50.........
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                                 (((((...)).)))))))))))).
chr-3D.trna8-Ile-AAT     AGGUUCGAGA-CCUGCAUGGGCCA 74
chr-3D.trna7-Ile-AAT     AGGUUCGAGA-CCUGCAUGGGCCA 74
chr-2A.trna5-Ile-AAT     AGGUUCGAGA-CCUGCAUGGGCCA 74
chr-2C.trna126-Ile-AAT   AGGUUCGAGA-CCUGCAUGGGCCA 74
chr-2A.trna87-Ile-AAT    AGGUUCGAGA-CCUGCAUGGGCCA 74
chr-7D.trna64-Ile-AAT    AGGUUCGAGA-CCUGCAUGGGCCA 74
chr-7D.trna35-Ile-AAT    AGGUUCGAGA-CCUGCAUGGGCCA 74
chr-7D.trna34-Ile-AAT    AGGUUCGAGA-CCUGCAUGGGCCA 74
chr-7D.trna32-Ile-AAT    AGGUUCGAGA-CCUGCAUGGGCCA 74
chr-2A.trna98-Ile-AAT    AGGUUCGAGA-CCUGCAUGGGCCA 74
chr-2B.trna89-Ile-AAT    AGGUUCGAGA-CCUGCAUGGGCCA 74
chr-7C.trna12-Ile-AAT    AGGUUCGAGA-CCUGCAUGGGCCA 74
chr-2B.trna104-Ile-AAT   AGGUUCGAGA-CCUGCAUGGGCCA 74
chr-7B.trna39-Ile-AAT    AGGUUCGAGA-CCUGCAUGGGCCA 74
chr-7A.trna93-Ile-AAT    AGGUUCGAGA-CCUGCAUGGGCCA 74
chr-7A.trna17-Ile-AAT    AGGUUCGAGA-CCUGCAUGGGCCA 74
chr-6D.trna79-Ile-AAT    AGGUUCGAGA-CCUGCAUGGGCCA 74
chr-6D.trna51-Ile-AAT    AGGUUCGAGA-CCUGCAUGGGCCA 74
chr-2C.trna16-Ile-AAT    AGGUUCGAGA-CCUGCAUGGGCCA 74
chr-6C.trna50-Ile-AAT    AGGUUCGAGA-CCUGCAUGGGCCA 74
chr-6C.trna13-Ile-AAT    AGGUUCGAGA-CCUGCAUGGGCCA 74
chr-8B.trna24-Ile-AAT    AGGUUCGAGA-CCUGCAUGGGCCA 74
chr-6B.trna78-Ile-AAT    AGGUUCGAGA-CCUGCAUGGGCCA 74
chr-6B.trna55-Ile-AAT    AGGUUCGAGA-CCUGCAUGGGCCA 74
chr-6B.trna3-Ile-AAT     AGGUUCGAGA-CCUGCAUGGGCCA 74
chr-6A.trna79-Ile-AAT    AGGUUCGAGA-CCUGCAUGGGCCA 74
chr-6A.trna77-Ile-AAT    AGGUUCGAGA-CCUGCAUGGGCCA 74
chr-2C.trna127-Ile-AAT   AGGUUCGAGA-CCUGCAUGGGCCA 74
chr-5D.trna15-Ile-AAT    AGGUUCGAGA-CCUGCAUGGGCCA 74
chr-5D.trna11-Ile-AAT    AGGUUCGAGA-CCUGCAUGGGCCA 74
chr-2D.trna96-Ile-AAT    AGGUUCGAGA-CCUGCAUGGGCCA 74
chr-5C.trna54-Ile-AAT    AGGUUCGAGA-CCUGCAUGGGCCA 74
chr-5C.trna16-Ile-AAT    AGGUUCGAGA-CCUGCAUGGGCCA 74
chr-5C.trna15-Ile-AAT    AGGUUCGAGA-CCUGCAUGGGCCA 74
chr-5C.trna14-Ile-AAT    AGGUUCGAGA-CCUGCAUGGGCCA 74
chr-5C.trna13-Ile-AAT    AGGUUCGAGA-CCUGCAUGGGCCA 74
chr-5B.trna64-Ile-AAT    AGGUUCGAGA-CCUGCAUGGGCCA 74
chr-5B.trna31-Ile-AAT    AGGUUCGAGA-CCUGCAUGGGCCA 74
chr-5B.trna9-Ile-AAT     AGGUUCGAGA-CCUGCAUGGGCCA 74
chr-5A.trna58-Ile-AAT    AGGUUCGAGA-CCUGCAUGGGCCA 74
chr-5A.trna45-Ile-AAT    AGGUUCGAGA-CCUGCAUGGGCCA 74
chr-5A.trna42-Ile-AAT    AGGUUCGAGA-CCUGCAUGGGCCA 74
chr-5A.trna11-Ile-AAT    AGGUUCGAGA-CCUGCAUGGGCCA 74
chr-5A.trna8-Ile-AAT     AGGUUCGAGA-CCUGCAUGGGCCA 74
chr-5A.trna7-Ile-AAT     AGGUUCGAGA-CCUGCAUGGGCCA 74
chr-4D.trna68-Ile-AAT    AGGUUCGAGA-CCUGCAUGGGCCA 74
chr-4C.trna17-Ile-AAT    AGGUUCGAGA-CCUGCAUGGGCCA 74
chr-2D.trna112-Ile-AAT   AGGUUCGAGA-CCUGCAUGGGCCA 74
chr-4A.trna56-Ile-AAT    AGGUUCGAGA-CCUGCAUGGGCCA 74
chr-3A.trna45-Ile-AAT    AGGUUCGAGA-CCUGCAUGGGCCA 74
chr-3D.trna51-Ile-AAT    AGGUUCGAGA-CCUGCAUGGGCCA 74
chr-3B.trna16-Ile-AAT    AGGUUCGAGA-CCUGCAUGGGCCA 74
chr-3C.trna58-Ile-AAT    AGGUUCGAGA-CCUGCAUGGGCCA 74
chr-3A.trna2-Ile-AAT     AGGUUCGAGA-CCUGCAUGGGCCA 74
chr-3C.trna13-Ile-AAT    AGGUUCGAGA-CCUGCAUGGGCCA 74
chr-5D.trna10-Ile-AAT    AGGUUCGGGA-CCUGCAUGGGCCA 74
chr-2A.trna84-Ile-AAT    AGGUUCGAGA-CCUGCAUGGGCCA 74
chr-2B.trna12-Ile-AAT    AGGUUCGAGA-CCUGCAUGGGCCA 74
chr-2C.trna18-Ile-AAT    AGGUUCGAGA-CCUGCAUGGGCCA 74
chr-2D.trna11-Ile-AAT    AGGUUCGAGA-CCUGCAUGGGCCA 74
chr-3D.trna70-Ile-AAT    AGGUUCGAGA-CCUGCAUGGGCCA 74
chr-6C.trna3-Ile-AAT     AGGUUCGAGA-CCUGCAUGGGCCA 74
chr-4B.trna15-Ile-AAT    AGGUUCGAGA-CCUGCAUGGGCCA 74
chr-6D.trna7-Ile-AAT     AGGUUCGAGA-CCUACAUGGGCCA 74
chr-7C.trna47-Ile-AAT    AGGUUCGAGA-CCUGCAUGGUUCC 74
chr-7C.trna46-Ile-AAT    AGUUUCGAGA-CCUGCAUGGUCCA 74
chr-7B.trna52-Ile-AAT    AGGUUCGAGA-CCUGCAUGGUCCA 82
chr-6A.trna75-Ile-AAT    CAGAUCGAGACCUGCGUAGGCAAG 75
                                 .........70........80...
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