```
                          (((((((..((((.........)))).(((((((...)))))))).....(((((.....
chr-8.trna136-Ile-AAT     AACCUAUAAGCUCAACUGG-AAGAGCAUUGUGCA-AUUGCACAAAUGAUGUAGGUUCAAA 58
chr-8.trna138-Ile-AAT     AACCUAUAAGCUCAACUGG-AAGAGCAUUGUGCA-AUUGCACAAAUGAUGUAGGUUCAAA 58
chr-2.trna74-Ile-AAT      AACCUAUUAGCUCAACUGG-AAGAGCAUUGUGCA-AUUGCACAAAUGAUGUAGGUUCAAA 58
chr-8.trna125-Ile-AAT     AACCUAUUAGCUCAACUGG-AAGAGCAUUGUGCA-AUUGCACAAAGGAUGUAGGUUCGAA 58
chr-8.trna115-Ile-TAT     AGCCUAUUAGCUCAAUUGG-UAGAGCAGUGUGCU-AUAG-ACAUAGACUGUAGGUUCAAA 57
chr-5.trna98-Ile-TAT      AACCUAUUAGCUCAAAUGG-AAGAGCAUUGUGCU-AU-GCACAA--GAUGUGGAUUCGAU 55
chr-2.trna71-Ile-TAT      AACCUAUUAGCUCAAAUGG-AAGAGCAUUGUGCU-AU-GCACAA--GAUGUGGGUUCGAU 55
chr-4.trna65-Ile-TAT      AACCUAUUAGCUCAAAUGG-AAGAGCAUUGUGCU-AU-GCGCAA--GAUGUGGGUUCGAU 55
chr-7.trna59-Ile-TAT      AACCUAUUAGCUCAAAUGG-AAGAGCAUUGUGCU-AU-GCACAA--GAUGUGGGUUCGAU 55
chr-5.trna51-Ile-TAT      AACCUAUUAGCUCAAAUGG-AAGAGCAUUGUGCU-AU-GCACAA--GAUGUGGGUUCGAU 55
chr-7.trna61-Ile-TAT      GACCUAUUAGCUCAAAUGG-CAGAGCAUUGUGCU-AU-GCACAA--GAUGUGGGUUCGAU 55
chr-5.trna44-Ile-TAT      AACCUAUUAGCUCAACUGG-AAGAGCAUUGUGCU-AU-GCACAA--GAUGUGGGUUCGAU 55
chr-2.trna70-Ile-TAT      AACCUAUUAGCUCAAAUGG-AAGAGCAUUGUGCU-AU-GCACAA--GAUAUGGGUUCGAA 55
chr-4.trna62-Ile-TAT      GACCUAUUAGCUCAAAUGG-UAGAGCAUUGUGCU-AU-GCACAA--GAUGUGGGUUCAAU 55
chr-3.trna57-Ile-TAT      AACCUAUUAGCUCAGUUGG-CAGAGCAUUGUGCU-AU-GCACAA--GAUGUGGGUUCGAU 55
chr-3.trna42-Ile-TAT      AACCUAUUAGCUCAAAUGG-AAGAGCAUUGUGCU-AU-GCACAA--GAUGUGGGUUCGGU 55
chr-5.trna115-Ile-TAT     GGUCUAUUAGUUCAAAUGG-UAGAGCAUUGUGCU-AU-GCACAA--GAUGUGGGUUCGAA 55
chr-8.trna143-Ile-TAT     AACCUAUUAUCUCAAAUGG-AAGAGCAUUGUGCU-AU-GCACAA--GAUGUGGGUUCGAU 55
chr-8.trna144-Ile-TAT     AACCUAUUAUCUCAAAUGG-AAGAGCAUUGUGCU-AU-GCACAA--GAUGUGGGUUCGAU 55
chr-5.trna57-Ile-TAT      AACCUAUUAGCUCAAAUGU-CAGAGCAUUGCGCU-AU-GCACAA--GAUAUGGGUUCGAU 55
chr-5.trna88-Ile-TAT      AGCCUAUUAGCUUAAAUGG-CAGAGCAUUGUGCU-AU-GCUCAA--GAUGUGGGUUUGAU 55
chr-1.trna29-Ile-AAT      CACCUAUUAGCUCAAAUGG-AAGAGCA-UGUGCA-AU-GCGCAA--GAUGUGGGUUCGAU 54
chr-3.trna40-Ile-TAT      AACAUAUUAGCUCAAUUGG-AAGAGCGUUGUGUU-AU-GCACAA--GAUGUGGGUUCAAU 55
chr-5.trna109-Ile-TAT     GGUCCUGUAGCUCAGUUGGUUAGAGCGUUGGUCAUAUGAGCCGAAGGUCGCGAGUUCGAG 60
chr-5.trna39-Ile-AAT      GGCCUAUUAGCUCAGCUGGUUAGAGCGUCGUGCUAAUAACGCGAAGGUCGCAGGUUCGAG 60
chr-5.trna41-Ile-AAT      GGCCUAUUAGCUCAGCUGGUUAGAGCGUCGUGCUAAUAACGCGAAGGUCGCAGGUUCGAG 60
chr-6.trna53-Ile-AAT      GGCCUAUUAGCUCAGCUGGUUAGAGCGUCGUGCUAAUAACGCGAAGGUCGCAGGUUCGAG 60
chr-6.trna64-Ile-AAT      GGCCUAUUAGCUCAGCUGGUUAGAGCGUCGUGCUAAUAACGCGAAGGUCGCAGGUUCGAG 60
chr-7.trna28-Ile-AAT      GGCCUAUUAGCUCAGCUGGUUAGAGCGUCGUGCUAAUAACGCGAAGGUCGCAGGUUCGAG 60
chr-3.trna67-Ile-AAT      GGCCUAUUAGCUCAGUUGGUUAGAGCGUCGUGCUAAUAACGCGAAGGUCGCAGGUUCGAG 60
chr-8.trna78-Ile-AAT      GGCCUAUUAGCUCAGUUGGUUAGAGCGUCGUGCUAAUAACGCGAAGGUCGCAGGUUCGAG 60
chr-3.trna22-Ile-AAT      GGCCCAUUAGCUCAGUUGGUUAGAGCGUCGUGCUAAUAACGCGAAGGUCGCAGGUUCGAG 60
chr-3.trna73-Ile-AAT      GGCCCAUUAGCUCAGUUGGUUAGAGCGUCGUGCUAAUAACGCGAAGGUCGCAGGUUCGAA 60
chr-9.trna78-Ile-AAT      GGCCCAUUAGCUCAGUUGGUUAGAGCGUGGUGCUAAUAACGCCAAGGUCGCAGGUUCGAC 60
chr-9.trna35-Ile-AAT      GGCCCAUUAGCUCAGUUGGUUAGAGCGUGGUGCUAAUAACGCCAAGGUCGCAGGUUCGAC 60
chr-2.trna32-Ile-AAT      GGCCUAUUAGCUCAGUUGGUUAGAGCGUGGUGCUAAUAACGCCAAGGUCGCAGGUUCGAG 60
chr-9.trna77-Ile-AAT      GGCCUAUUAGCUCAGUUGGUUAGAGCGUGGUGCUAAUAACGCCAAGGUCGCAGGUUCGAG 60
chr-8.trna123-Ile-AAT     GGCCUAUUAGCUCAGCUGGUUAGAGCGUUGUGCUAAUAACGCGAAGGUCGCAGGUUCGAG 60
chr-9.trna86-Ile-TAT      AGUCCCGUAGCUCAGUUGGUUAGAGCGUUGGUCUUAUGAGCCGAAGGUCGCGGGUUCGAG 60
chr-8.trna103-Ile-TAT     GGUCCCGUAGCUCAGUUGGUUAGAGCGUUGGUCUUAUGAGCCGAAGGUCGCGGGUUCGAG 60
chr-6.trna52-Ile-TAT      AGUCCCGUAGCUCAGUUGGUUAGAGCGUUGGUCUUAUGAGCCGAAGGUCGCGGGUUCGAG 60
chr-5.trna108-Ile-TAT     GGUCCUGUAGCUCAGUUGGUUAGAGCGUUGGUCUUAUGAGCCGAAGGUCGCGAGUUCGAG 60
chr-5.trna82-Ile-TAT      GGUCCCGUAGCUCAGUCGGUUAGAGCGUUGGUCUUAUGAGCCGAAGGUCGCGAGUUCGAG 60
chr-5.trna110-Ile-TAT     GGUCCUGUAGCUCAGUUGGUUAGAGUGUUGGUCUUAUGAGCCGAAGGUCGCGAGUUCGAG 60
chr-5.trna111-Ile-TAT     GGUCCUGUAGCUCAGUUGGUUAGAGCAUUGGUCUUAUGAGCCGAAGGUCGCGAGUUCGAG 60
                          .........10........20........30........40........50.........

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chr-8.trna136-Ile-AAT     UCCUACAUAGGUUG 72
chr-8.trna138-Ile-AAT     UCCUACAUAGGUUG 72
chr-2.trna74-Ile-AAT      UCCUACAUAGGUUG 72
chr-8.trna125-Ile-AAT     UCCUACAUAGGUUG 72
chr-8.trna115-Ile-TAT     UCCUACAUAGGCUU 71
chr-5.trna98-Ile-TAT      UCCCACAUAGGUUA 69
chr-2.trna71-Ile-TAT      UCCCACAUAGGUUA 69
chr-4.trna65-Ile-TAT      UCCCACAUAGGUUA 69
chr-7.trna59-Ile-TAT      UCCCACAUAGGUUA 69
chr-5.trna51-Ile-TAT      UCCCAUAUAGGUUA 69
chr-7.trna61-Ile-TAT      UCCCACAUAGGUUA 69
chr-5.trna44-Ile-TAT      UCCUACAUAGGUUA 69
chr-2.trna70-Ile-TAT      UCCCAUAUAGGUUA 69
chr-4.trna62-Ile-TAT      UCCCACAUAGGUUA 69
chr-3.trna57-Ile-TAT      UCCUACAUAGGUUA 69
chr-3.trna42-Ile-TAT      UCCCACAUAGGUGA 69
chr-5.trna115-Ile-TAT     UCCCACAUAGGCUA 69
chr-8.trna143-Ile-TAT     UCCCACAUAGGCUA 69
chr-8.trna144-Ile-TAT     UCCCACAUAGGCUA 69
chr-5.trna57-Ile-TAT      UCCCACAUAGGUUA 69
chr-5.trna88-Ile-TAT      UCCCACAUAGGUUA 69
chr-1.trna29-Ile-AAT      UCCCACAUAGGUUA 68
chr-3.trna40-Ile-TAT      UCCCACAUAGGUUU 69
chr-5.trna109-Ile-TAT     CCUCACCAGAACCA 74
chr-5.trna39-Ile-AAT      ACCUGCAUGGGCCA 74
chr-5.trna41-Ile-AAT      ACCUGCAUGGGCCA 74
chr-6.trna53-Ile-AAT      ACCUGCAUGGGCCA 74
chr-6.trna64-Ile-AAT      ACCUGCAUGGGCCA 74
chr-7.trna28-Ile-AAT      ACCUGCAUGGGCCA 74
chr-3.trna67-Ile-AAT      ACCUGCAUAGGCCA 74
chr-8.trna78-Ile-AAT      ACCUGCAUAGGCCA 74
chr-3.trna22-Ile-AAT      ACCUGCAUGGGCCA 74
chr-3.trna73-Ile-AAT      ACCUGCAUGGGCCA 74
chr-9.trna78-Ile-AAT      CCCUGCAUGGGCCA 74
chr-9.trna35-Ile-AAT      CCCUGCAUGGGCCA 74
chr-2.trna32-Ile-AAT      CCCUGCAUAGGCCA 74
chr-9.trna77-Ile-AAT      CCCUGCAUAGGCCA 74
chr-8.trna123-Ile-AAT     ACCUGCAUGGGCCA 74
chr-9.trna86-Ile-TAT      CCCCGCCGGGACUA 74
chr-8.trna103-Ile-TAT     CCCCGCCGGGACCA 74
chr-6.trna52-Ile-TAT      CCCCGCCGGGACUA 74
chr-5.trna108-Ile-TAT     CCUCGCCAGGACCA 74
chr-5.trna82-Ile-TAT      CCUCGCCGGGACCA 74
chr-5.trna110-Ile-TAT     CCUCGCCAGGACCA 74
chr-5.trna111-Ile-TAT     CCUCGCCAGGACCA 74
                          .........70...

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