```
                          ((((.....(((..((((.........)))).(((((.......)))))).....(((((.
chr-1.trna132-Arg-TCT     GCAU-----CCAU-GUCUAAUGGA-UAGGACAGAGGUCUUCUAAACCUUUGGU-AUAGGU 52
chr-7.trna113-Arg-TCT     ACGU-----CCAUUGCCUAAUGGA-UAGGACUGAGGUCUUCUAAACCUUUGGU-AUAGGU 53
chr-3.trna148-Arg-TCT     GCGU-----CCAUUGUCUAAUGGA-UAGGACAGAGGUCUUCUAAACCUUUGGU-AUAGGU 53
chr-9.trna70-Arg-TCT      GCGU-----CCAUUAUCUAAUGGA-UAGGACAGAGGUCUUCUAAACCUUUGGU-AUAGGU 53
chr-12.trna21-Arg-TCT     GCGU-----CCAUUGUCUAAUGGA-UAGGACAGAGGUCUUCUAAAACUUUGGU-AUAGGU 53
chr-7.trna123-Arg-TCT     CCGU-----CCAUUGUCUAAUGGA-UAGGACAGAGGUCUUCUAAACCUUUGGU-AUAGUU 53
chr-9.trna86-Arg-TCT      ACAU-----CCAUUGUCUAAUGGA-UAGGACAGAGGUCUUCUAAACCUUUGGU-AUAGGU 53
chr-1.trna136-Arg-TCT     GCAU-----CCAUUGUCUAAUGGA-UAGGACAGAGGUCUUCUAAACCUUUCGU-AUAGGU 53
chr-12.trna17-Arg-TCT     GCGU-----CCAUUGUCUAAUGGA-UA-GACAGAGGUCUUCUAAACAUUUGGC-AUACGU 52
chr-3.trna29-Arg-TCT      GCGG-----AUAUGGUCGAAUGG--UAAAAUUUCUCUUUUCUAAGGAGAAGAU-GCGGGU 52
chr-3.trna62-Arg-TCG      GACC-----GCAUAGCGCAGUGGAUUAGCGCGUUUGACUUCGGAUCAAAAGGUCGUGGGU 55
chr-5.trna42-Arg-TCG      GACC-----GCAUAGCGCAGUGGAUUAGCGCGUUUGACUUCGGAUCAAAAGGUCGUGGGU 55
chr-6.trna107-Arg-TCG     GACC-----GCAUAGCGCAGUGGAUUAGCGCGUUUGACUUCGGAUCAAAAGGUCGUGGGU 55
chr-10.trna79-Arg-TCG     GACC-----GCAUAGCGCAGUGGAUUAGCGCGUCUGACUUCGGAUCAGAAGGUCGUGGGU 55
chr-5.trna104-Arg-CCG     GAUC-----UCAUAGCGGAGUGGA-UAUCGCGUUAGAUUCCGAAUCUAAAGGUCGUGGGU 54
chr-6.trna65-Arg-CCT      GCGC-----CUGUAGCUCAGUGGA-UAGAGCGUCUGUUUCCUAAGCAGAAAGUCGUAGGU 54
chr-5.trna38-Arg-CCT      GCGC-----CUGUAGCUCAGUGGA-UAGAGCGUCUGUUUCCUAAGCAGAAAGUCGUAGGU 54
chr-6.trna35-Arg-CCT      GCGC-----CUGUAGCUCAGUGGA-UAGAGCGUCUGUUUCCUAAGCAGAAAGUCGUAGGU 54
chr-2.trna83-Arg-CCT      GCGC-----CUGUAGCUCAGUGGA-UAGAGCGUCUGUUUCCUAAGCAGAAGGUCGUAGGU 54
chr-6.trna115-Arg-CCT     GCGC-----UUGUAGCUCAGUGGA-UAGAGCGUCUGUUUCCUAAGCAGAAGGUCGUAGGU 54
chr-6.trna5-Arg-CCT       GCGU-----CUGUAGCUCAGUGGA-UAGAGCGUCUGUUUCCUAAGCAGAAGGUCGUAGGU 54
chr-4.trna83-Arg-CCT      GCGC-----CUGUAGCUCAGUGGA-UAGAGCGUCUGUUUCCUAAGCAGAAGGUCGUAGGU 54
chr-10.trna11-Arg-CCT     GUGC-----CUGUAGCUCAGUGGA-UAAAGCGUCUGUUUCCUAAGCAGAAAGUGGUAGGU 54
chr-12.trna56-Arg-ACG     GACU-----CUGUGGCCCAAUGGA-UAAGGCGCUGGUCUACGGAACCAGAGAUUCUGGGU 54
chr-7.trna77-Arg-ACG      GACU-----CUGUGGCCCAAUGGA-UAAGGCGCUGGUCUACGGAACCAGAGAUUCUGGGU 54
chr-7.trna97-Arg-ACG      GACU-----CUGUGGCCCAAUGGA-UAAGGCGCUGGUCUACGGAACCAGAGAUUCUGGGU 54
chr-10.trna125-Arg-ACG    GACU-----CUGUGGCCCAAUGGA-UAAGGCGCUGGUCUACGGAACCAGAGAUUCUGGGU 54
chr-2.trna87-Arg-ACG      GACU-----CCAUGGCCCAAUGGA-UAAGGCGCUGGUCUACGGAACCAGAGAUUCUGGGU 54
chr-5.trna34-Arg-ACG      AACU-----ACGUGGCCCAAUGGA-UAAGGUGCUGGUCUACGAAACCAGAGAUUCUGGGU 54
chr-4.trna67-Arg-ACG      GACU-----CUGUGGCCCAAUGGA-UAAGGCGCUGGUCUACGGAACCAGAGAUUCUGGGU 54
chr-3.trna106-Arg-ACG     GAUUA--UUCCAUGGCCCAAUGGA-UAAGUCGCUGGUCUACGGAACCAGAGAAUCUGGGU 57
chr-1.trna93-Arg-TCT      GCCC-----CCAUGGCCUAAUGGA-UAAGGUGCUUGACUUCUAAUCAAGCGAUUGUGGGU 54
chr-9.trna111-Arg-TCT     GCGC-----CCAUGGCCUAAUGGA-UAAGGCGCUUGACUUCUAUUCAAGCGAUUGUGGGU 54
chr-2.trna115-Arg-TCT     GCGC-----CCAUGGCCUAAUGGA-UAAGGCGCUUGACUUCUAAUCAAGCGAUUGUGGGU 54
chr-6.trna88-Arg-TCT      GCAC-----CCAUGGCCUAAUGGA-UAAGGCGUCUGACUUCUAAUCAGGCGAUUGUGGGU 54
chr-8.trna80-Arg-TCT      GCGC-----CCAUGGCCUAAUGGA-UAAGGCGUCUGACUUCUAAUCAGGCGAUUGUGGGU 54
chr-2.trna80-Arg-TCT      GCGC-----CCAUGGCCUAAUGGA-UAAGGCGCUUGACUUCUAAUCAAGCGAUUGUGGGU 54
chr-6.trna4-Arg-TCT       GCGC-----CCAUGGCCUAAUGGA-UAAGGCGCUUGACUUCUAAUCAAGCGAUUGUGGGU 54
chr-8.trna32-Arg-TCT      GCGC-----CCAUGGCCUAAUGGA-UAAGGCGCUUGACUUCUAAUCAAGCGAUUGUGGGU 54
chr-5.trna7-Arg-CCG       GUUC-----GCGUGGCCUAAUGGA-UAAGGCGCUCGCCUCCGGAGCGGGAGAUUGUGGGU 54
chr-5.trna49-Arg-CCG      GUUC-----GCGUGGCCUAAUGGA-UAAGGCGCUCGCCUCCGGAGCGGGAGAUUGUGGGU 54
chr-7.trna89-Arg-CCG      GAUC-----GCGUGGCCUAAUGGA-UAAGGCGCUCGCCUCCGGAGCGGGAGAUUGUGGGU 54
chr-4.trna54-Arg-TCT      GCGC-----UCUUGGCCUAAUUGA-UAUGGCGCUUGACUUCUAAUCAAGCGAUUGUGGGA 54
chr-12.trna80-Arg-TCT     GCAC-----CCAUGGCCUAACGGA-UAAGUUGCUUUACUUCUAAUUAAGCGAUUGUAGGU 54
chr-12.trna36-Arg-ACG     GAUU-----UCACGGCCCAAUUGA-UAAGGCGCUGGCGUACGGAACCAGAGAUUCCUUGG 54
chr-5.trna105-Arg-ACG     GGGC-----AUUUGGUCUAGUGG--UAUGAUUCUCGCUUACGGUACGAGAGGUCUUGAGU 53
chr-1.trna59-Arg-ACG      GGG-----CAUGUAGCUCAGAGGAUUAGAGCACGUGGCUACGAACCAUGGUUUUGGGGGU 55
chr-3.trna112-Arg-ACG     GGG-----CCUGUAGCUCAGAGGAUUAGAGCACGUGGCUACGAACUACGGUGUCGGGGGU 55
chr-1.trna79-Arg-ACG      GGGUGGGGCCUAUAGCUCAGAGAAUUACAACACGUGGCUACGAACCACGAUGUCGGGGGU 60
chr-10.trna33-Arg-ACG     GGGUGGGGCCUGUAGCUCAGAGAAUUAGAGCACGUGGCUACGAACCACGGUGUCGGGGGU 60
chr-7.trna95-Arg-ACG      GGGUGGGGCCUGUAGCUCAGAGGAUUAGAGCACGUGGCUACGAACCACGGUGUCGGGGGU 60
chr-9.trna62-Arg-ACG      GGGUGGGGCCUGUAGCUCAGAGGAUUAGAGCACAUGGCUACGAACCAUGGUGUCGGGGGU 60
chr-11.trna53-Arg-ACG     GGGUGGAGCCUGUAGCUCAGAGGAUUAGAGCACGUGGCUACGAACCACGGUGUCGGGGGU 60
chr-12.trna100-Arg-ACG    GGGUGGGACCUGUAGCUCUAAGGAUUAGAGCACGUGGCUACGAACCACGGUGUCGGGGGU 60
chr-3.trna126-Arg-ACG     GGGUGGGGCCUAUAGCUCAGAGGAUUAGAGCACGUGGCUACGAACCAUGGUGUCGGGGGU 60
chr-4.trna84-Arg-ACG      GGGUGG-GCCUGUAGCUCAGAGGAUUAGAGCACGUGGCUACGAACCACGGUAUCGGGGGG 59
                          .........10........20........30........40........50.........

                          .........)))))))))).....)).
chr-1.trna132-Arg-TCT     U--CAAAUCCUAUUGGAC----GCA 71
chr-7.trna113-Arg-TCT     U--CAAAUCCUAUUGAAC----GCA 72
chr-3.trna148-Arg-TCT     U--CAAAUCUUAUUGGAC----ACA 72
chr-9.trna70-Arg-TCT      U--CAAAUACUAUUGGAU----GCA 72
chr-12.trna21-Arg-TCT     U--CAAAUCCUAUUGGAC----GCA 72
chr-7.trna123-Arg-TCT     U--CAAAUCCUAUUGGGC----AUA 72
chr-9.trna86-Arg-TCT      U--CAAAUCCUAUUAGAC----GCA 72
chr-1.trna136-Arg-TCT     U--CAAAUCCUAUUGGAC----GCA 72
chr-12.trna17-Arg-TCT     U--CAAAUCUUAUUGGAC----GCA 71
chr-3.trna29-Arg-TCT      U--CGAUUCCCGUUAUCC----ACC 71
chr-3.trna62-Arg-TCG      U--CGACUCCCACUG----UGGUCG 74
chr-5.trna42-Arg-TCG      U--CGACUCCCACUG----UGGUCG 74
chr-6.trna107-Arg-TCG     U--CGACUCCCACUG----UGGUCG 74
chr-10.trna79-Arg-TCG     U--CGACUCCCACUG----UGGUCG 74
chr-5.trna104-Arg-CCG     U--CGAAUCCCACUG----AGAUCA 73
chr-6.trna65-Arg-CCT      U--CGAUCCCUACCU----GGCGCG 73
chr-5.trna38-Arg-CCT      U--CGACCCCUACCU----GGCGCG 73
chr-6.trna35-Arg-CCT      U--CGACCCCUACCU----GGCGCG 73
chr-2.trna83-Arg-CCT      U--CGACCCCUACCU----GGCGCG 73
chr-6.trna115-Arg-CCT     U--CGACCCCUACCU----AGCGCG 73
chr-6.trna5-Arg-CCT       U--CGACCCCUACCU----GACGCG 73
chr-4.trna83-Arg-CCT      U--CGACCCCUAUCU----GGCGCG 73
chr-10.trna11-Arg-CCT     U--CGACCCCUACCUGGCGGGCGCA 77
chr-12.trna56-Arg-ACG     U--CGAUCCCCAGCAGAG----UCG 73
chr-7.trna77-Arg-ACG      U--CGAUCCCCAGCAGAG----UCG 73
chr-7.trna97-Arg-ACG      U--CGAUCCCCAGCAGAG----UCG 73
chr-10.trna125-Arg-ACG    U--CGAUCCCCAGCAGAG----UCG 73
chr-2.trna87-Arg-ACG      U--CGAUCCCCAGUGGAG----UCG 73
chr-5.trna34-Arg-ACG      U--CGAUCCCUAACGGAG----UUG 73
chr-4.trna67-Arg-ACG      UCUCGAUCCCCAGCAGAG----UCG 75
chr-3.trna106-Arg-ACG     C--UGAUCCCUAGUGGAA----UCA 76
chr-1.trna93-Arg-TCT      U--CGAGUCCCACUGGGGUUGAGCU 77
chr-9.trna111-Arg-TCT     U--CGAGUCCCACUGGGC----GUG 73
chr-2.trna115-Arg-TCT     U--UGAGUCCCACUGGGC----GUG 73
chr-6.trna88-Arg-TCT      U--CGAGUCCCACUGGGU----GUG 73
chr-8.trna80-Arg-TCT      U--CGAGUCCCACUGGGC----GUG 73
chr-2.trna80-Arg-TCT      U--CGAGUCCCACUGGGC----GUG 73
chr-6.trna4-Arg-TCT       U--CGAGUCCCACUGGGC----GUG 73
chr-8.trna32-Arg-TCT      U--CGAGUCCCACUGGGC----GUG 73
chr-5.trna7-Arg-CCG       U--CGAGUCCCACCGUGA----ACG 73
chr-5.trna49-Arg-CCG      U--CGAGUCCCACCGUGA----ACG 73
chr-7.trna89-Arg-CCG      U--CGAGUCCCAUCGCGA----UCG 73
chr-4.trna54-Arg-TCT      U--UGAGUCCCACUGGGC----GUG 73
chr-12.trna80-Arg-TCT     U--CGAGUCCCGCUGGGU----GUG 73
chr-12.trna36-Arg-ACG     A-UCGAUCCCUAGUGAAG----UUA 74
chr-5.trna105-Arg-ACG     U--CAAUUCUCGGAAUGC----UCC 72
chr-1.trna59-Arg-ACG      U--CGAAUCCCUCCUCGC----CCA 74
chr-3.trna112-Arg-ACG     U--CGAAUCCCUCCUCGC----UCA 74
chr-1.trna79-Arg-ACG      U--CGAAUCCCUCCUUAC----CCA 79
chr-10.trna33-Arg-ACG     U--CGAAUCCCUCCUCGC----CCA 79
chr-7.trna95-Arg-ACG      U--CGAAUCCCUCCUCGC----CCN 79
chr-9.trna62-Arg-ACG      U--CGAAUCCCUCCUCGC----CCA 79
chr-11.trna53-Arg-ACG     U--UGAAUCCCUCCUCGC----CCA 79
chr-12.trna100-Arg-ACG    U--CGAAUCCCUCCUCGC----CCA 79
chr-3.trna126-Arg-ACG     U--CGAAUCCCUCCUCGC----CUA 79
chr-4.trna84-Arg-ACG      U--UGAAUCACUCCUCGC----CCA 78
                          .........70........80....

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