```
                        ((.(((((..((((.....................)))).(((((.......)))))).....
chr-1.trna319-Asp-GTC   GU-CGUUGUAGUAUAG----------UGGUAAGUAUUCCCGCCUGUCACGCGGG-UGAC 47
chr-1.trna318-Asp-GTC   GU-CGUUGUAGUAUAG----------UGGUAAGUAUUCCCGCCUGUCACGCGGG-UGAC 47
chr-1.trna321-Asp-GTC   GU-CGUUGUAGUAUAG----------UGGUAAGUAUUCCCGCCUGUCACGCGGG-UGAC 47
chr-1.trna322-Asp-GTC   GU-CGUUGUAGUAUAG----------UGGUAAGUAUUCCCGCCUGUCACGCGGG-UGAC 47
chr-2.trna2-Asp-GTC     GU-CGUUGUAGUAUAG----------UGGUAAGUAUUCCCGCCUGUCACGCGGG-UGAC 47
chr-2.trna54-Asp-GTC    GU-CGUUGUAGUAUAG----------UGGUAAGUAUUCCCGCCUGUCACGCGGG-UGAC 47
chr-7.trna16-Asp-GTC    GU-CGUUGUAGUAUAG----------UGGUAAGUAUUCCCGCCUGUCACGCGGG-UGAC 47
chr-7.trna33-Asp-GTC    GU-CGUUGUAGUAUAG----------UGGUAAGUAUUCCCGCCUGUCACGCGGG-UGAC 47
chr-7.trna638-Asp-GTC   GU-CGUUGUAGUAUAG----------UGGUAAGUAUUCCCGCCUGUCACGCGGG-UGAC 47
chr-7.trna639-Asp-GTC   GU-CGUUGUAGUAUAG----------UGGUAAGUAUUCCCGCCUGUCACGCGGG-UGAC 47
chr-2.trna447-Asp-GTC   GU-CGUUGUAGUAUAG----------UGGUAAGUAUUCCCGCCUGUCACGCGGG-UGAC 47
chr-6.trna98-Asp-GTC    GU-CGUUGUAGUAUAG----------UGGUAAGUAUUCCCGCCUGUCACGCGGG-UGAC 47
chr-3.trna12-Asp-GTC    GU-CGUUGUAGUAUAG----------UGGUAAGUAUUCCCGCCUGUCACGCGGG-UGAC 47
chr-3.trna351-Asp-GTC   GU-CGUUGUAGUAUAG----------UGGUAAGUAUUCCCGCCUGUCACGCGGG-UGAC 47
chr-3.trna272-Asp-GTC   GU-CGUUGUAGUAUAG----------UGGUAAGUAUUCCCGCCUGUCACGCGGG-UGAC 47
chr-3.trna271-Asp-GTC   GU-CGUUGUAGUAUAG----------UGGUAAGUAUUCCCGCCUGUCACGCGGG-UGAC 47
chr-3.trna249-Asp-GTC   GU-CGUUGUAGUAUAG----------UGGUAAGUAUUCCCGCCUGUCACGCGGG-UGAC 47
chr-3.trna13-Asp-GTC    GU-CGUUGUAGUAUAG----------UGGUAAGUAUUCCCGCCUGUCACGCGGG-UGAC 47
chr-2.trna439-Asp-GTC   GU-CGUUGUAGUAUAG----------UGGUGAGUAUUCCCGCCUGUCACGCGGG-UGAC 47
chr-7.trna35-Asp-GTC    GU-CGUUGUAGUAUAG----------UGGUAAGUAUUCCCGCCUGUCACGCGGG-UGAC 47
chr-2.trna64-Asp-GTC    GU-CGUUGUAGUAUAG----------UGGUAAGUAUUCCCGCCUGUCACGCGGG-UGAC 47
chr-5.trna344-Asp-GTC   GU-CGUUGUAGUAUAG----------UGGUAAGUAUUCCCACUUGUCACGUGGG-UGAC 47
chr-5.trna139-Asp-GTC   CU-CGUUGUAGUAUAG----------UGGUAAGUAUUCCCGCCUGUCACGCGGG-UGAC 47
chr-7.trna4-Asp-GTC     GU-CGUUGUAGUAUAG----------UGGUAAGUAUUCCCGCCUGUCACGCGGG-UGAC 47
chr-7.trna637-Asp-GTC   ACUUGUUGUAGUAUAG----------UGGUAAGUAUUCCCGCCUGUCACGCGGG-UGAC 48
chr-7.trna640-Asp-GTC   ACUUGUUGUAGUAUAG----------UGGUAAGUAUUCCCGCCUGUCACGCGGG-UGAC 48
chr-3.trna507-Asp-GTC   GCAUGUUGUAGUAUAG----------UGGUAAGUAUUCCCGCCUGUCACGCGGG-UGAC 48
chr-5.trna468-Asp-GTC   GCACAUUGCAGUAUAG----------UGGUAAGUAUUCCCGCGUGUCAUGCGAG-UGAC 48
chr-4.trna128-Asp-GTC   GG-GAUUGUAGUUCAA----------UUGGUCAGAGCACCGCCUGUCAAGGCGGAAGCU 49
chr-4.trna415-Asp-GTC   GG-GAUUGUAGUUCAA----------UUGGUUAGAGCACCGCCUGUCAAGGCGGAAGCU 49
chr-7.trna204-Asp-GTC   GG-GAUUGUAGUUCAA----------UUGGUCAGAGCACCGCCUGUCAAGGCGGAAGCU 49
chr-2.trna484-Asp-GTC   GG-GAUUGUAGUUCAA----------UUGGUCAGAGCACCGCCUGUCAAGGCGGAAUCU 49
chr-2.trna28-Asp-GTC    GG-GGAAAUAGCUCAG----------UUGGUUAGAGUGCUGGUCUGUCAUGCCAGAAGUC 49
chr-4.trna32-Asp-GTC    GG-GGAAAUAGCUCAG----------UUGGUUAGAGUGCUGGUCUGUCAUGCCAGAAGUC 49
chr-4.trna469-Asp-GTC   GG-GGAAAUAGCUCAG----------UUGGUUAGAGUGCUGGUCUGUCAAGCCAGAAGUC 49
chr-7.trna26-Asp-GTC    GG-GGAAAUAGCUCAG----------UUGGUUAGAGUGCUGGUCUGUCAAGCCAGAAGUC 49
chr-6.trna331-Asp-GTC   GG-GGAAAUAGCUCAG----------UUGGUUAGAGUGCUGGUCUGUCAUGCCAGAAGUC 49
chr-6.trna332-Asp-GTC   GG-GGAAAUAGCUCAG----------UUGGUUAGAGUGCUGGUCUGUCAUGCCAGAAGUC 49
chr-1.trna132-Asp-GTC   GG-GGAAAUAGCUCAG----------UUGGUUAGAGUGCUGGUCUGUCACGCCAGAAGUC 49
chr-1.trna131-Asp-GTC   GG-GGAAAUAGCUCAG----------UUGGUUAGAGUGCUGGUCUGUCACGCCAGAAGUC 49
chr-4.trna43-Asp-GTC    GG-GGAAAUAGCUCAG----------UUGGUUAGAGUGCUGGUCUGUCACGCCAGAAGUC 49
chr-4.trna257-Asp-GTC   GG-GGAAAUAGCUCAG----------UUGGUUAGAGUGCUGGUCUGUCACGCCAGAAGUC 49
chr-6.trna303-Asp-GTC   GG-GGAAAUAGCUCAG----------UUGGUUAGAGUGCUGGUCUGUCACGCCAGAAGUC 49
chr-2.trna162-Asp-GTC   GG-GGAAAUAGCUCAG----------UUGGUUAGAGUGUUGGUCUGUCACGCCAGAAGUC 49
chr-2.trna73-Asp-GTC    GG-GGAAAUAGCUCAG----------UUGGUUAGAGUGCUGGUCUGUCACGCCAGAAGUC 49
chr-3.trna501-Asp-GTC   GG-GGAAAUAGCUCAG----------UUGGUUAGAGUGCUGGUCUGUCACGCCAGAAGUC 49
chr-6.trna34-Asp-GTC    GG-GGAAAUAGCUCAG----------UUGGUUAGAGUGCUGGUCUGUCACGCUAGAAGUC 49
chr-2.trna25-Asp-GTC    GG-GGAAAUAGCUCAG----------UUGGUUAGAGUGCUGGUCUGUCACGCCAGAAGUC 49
chr-3.trna61-Asp-GTC    GG-GGAAAUAGCUCAG----------UUGGUUAGAGUGCUGGUCUGUCACGCCAGAAGUC 49
chr-2.trna10-Asp-GTC    GC-GAGCGUAGUUCAA----------UGGUAA-AAUAUCUCCUUGUCAAGGAGA-AGAU 46
chr-7.trna51-Asp-GTC    CU-------AGUAUAG----------UGGUAAGUAUUCCCGCCUGUCACGCGGG-UGAC 41
chr-3.trna203-Asp-GTC   GGAUAUAAGUGAACAGUCAAAAAAGUUUGGUAAGUAUUCCCGCCUGUCACGCGGG-UGAC 59
chr-7.trna15-Asp-GTC    GGAUAUAAGUGAACAGUCAAAAAAGUUUGGUAAGUAUUCCCGCCUGUCACGCGGG-UGAC 59
chr-7.trna633-Asp-GTC   GGAUAUAAGUGAACAGUCAAAAAAGUUUGGUAAGUAUUCCCGCCUGUCACGCGGG-UGAC 59
                        .........10........20........30........40........50.........

                        (((((.......)))))............
chr-1.trna319-Asp-GTC   CCGGAUUCGAUCCCCGGCAACGGCG 72
chr-1.trna318-Asp-GTC   CCGGGUUCGAUCCCCGGCAACGGCG 72
chr-1.trna321-Asp-GTC   CCGGGUUCGAUCCCCGGCAACGGCG 72
chr-1.trna322-Asp-GTC   CCGGGUUCGAUCCCCGGCAACGGCG 72
chr-2.trna2-Asp-GTC     CCGGGUUCGAUCCCCGGCAACGGCG 72
chr-2.trna54-Asp-GTC    CCGGGUUCGAUCCCCGGCAACGGCG 72
chr-7.trna16-Asp-GTC    CCGGGUUCGAUCCCCGGCAACGGCG 72
chr-7.trna33-Asp-GTC    CCGGGUUCGAUCCCCGGCAACGGCG 72
chr-7.trna638-Asp-GTC   CCGGGUUCGAUCCCCGGCAACGGCG 72
chr-7.trna639-Asp-GTC   CCGGGUUCGAUCCCCGGCAACGGCG 72
chr-2.trna447-Asp-GTC   CCGGGUUCGAUCCCCGGCAACGGCG 72
chr-6.trna98-Asp-GTC    CCGGGUUCGAUCCCCGGCAACGGCG 72
chr-3.trna12-Asp-GTC    CCGGGUUCGAUCCCCGGCAACGGCG 72
chr-3.trna351-Asp-GTC   CCGGGUUCGAUCCCCGGCAACGGCG 72
chr-3.trna272-Asp-GTC   CCGGGUUCGAUCCCCGGCAACGGCG 72
chr-3.trna271-Asp-GTC   CCGGGUUCGAUCCCCGGCAACGGCG 72
chr-3.trna249-Asp-GTC   CCGGGUUCGAUCCCCGGCAACGGCG 72
chr-3.trna13-Asp-GTC    CCGGGUUCGAUCCCCGGCAACGGCG 72
chr-2.trna439-Asp-GTC   CCGGGUUCGAUCCCCGGCAACGGCG 72
chr-7.trna35-Asp-GTC    CCGGGUUCGACCCCCGGCAACGGCG 72
chr-2.trna64-Asp-GTC    CCGGGUUCGAUCCCCCGCAACGGCG 72
chr-5.trna344-Asp-GTC   CCGGGUUUGAUCCUCGGCAACGGCG 72
chr-5.trna139-Asp-GTC   CCGGGUUCGAUUCCCGGCAACGCCG 72
chr-7.trna4-Asp-GTC     CCGGGUUCGAUCCCCGGCUCCGGCG 72
chr-7.trna637-Asp-GTC   CCGGGUUCGAUCCCCGGCAACGGCG 73
chr-7.trna640-Asp-GTC   CCGGGUUCGAUCCCCGGCAACGGCG 73
chr-3.trna507-Asp-GTC   CCGGGUUCGUUCCCCGGCAACGGCG 73
chr-5.trna468-Asp-GTC   CCGGGUUGGAUCCCCGGCAACGGCG 73
chr-4.trna128-Asp-GTC   ACGGGUUCGAGCCCCGUCAGUCCCG 74
chr-4.trna415-Asp-GTC   GCGGGUUCGAGCCCCGUCAGUCCCG 74
chr-7.trna204-Asp-GTC   GCGGGUUCGAGCCCCGUCAGUCCCA 74
chr-2.trna484-Asp-GTC   ACGGGUUCGAGCCCCGUCAUUCCCG 74
chr-2.trna28-Asp-GTC    GUGGGUUCGAACCCCGUUUUCCCCG 74
chr-4.trna32-Asp-GTC    GUGGGUUCGAACCCCGUUUUCCCCG 74
chr-4.trna469-Asp-GTC   GCGGGUUCGAACCCCGUUUUCCCCG 74
chr-7.trna26-Asp-GTC    GCGGGUUCGAACCCCGUUUUCCCCG 74
chr-6.trna331-Asp-GTC   GCGGGUUCGAACCCCGUUUUCCCCG 74
chr-6.trna332-Asp-GTC   GCGGGUUCGAACCCCGUUUUCCCCG 74
chr-1.trna132-Asp-GTC   GCGGGUUCGAACCCCGUUUUCCCCG 74
chr-1.trna131-Asp-GTC   GCGGGUUCGAACCCCGUUUUCCCCG 74
chr-4.trna43-Asp-GTC    GCGGGUUCGAACCCCGUUUUCCCCG 74
chr-4.trna257-Asp-GTC   GCGGGUUCGAACCCCGUUUUCCCCG 74
chr-6.trna303-Asp-GTC   GCGGGUUCGAACCCCGUUUUCCUCG 74
chr-2.trna162-Asp-GTC   GCGGGUUCGAACCCCGUUUUCCCCG 74
chr-2.trna73-Asp-GTC    GCGGGUUCAAACCCCGUUUUCCCCG 74
chr-3.trna501-Asp-GTC   GCGGGUUCAAACCCCGUUUUCCCCG 74
chr-6.trna34-Asp-GTC    GCGGGUUCGAAGCCCGUUUUCCCCA 74
chr-2.trna25-Asp-GTC    GCAGGUUCGAACCCCGUUUUCCCCG 74
chr-3.trna61-Asp-GTC    GCGGGUUCGAA--CCGUUUUCCCCG 72
chr-2.trna10-Asp-GTC    ACGGGUUCGAUUCCCACCGCUCGCC 71
chr-7.trna51-Asp-GTC    CCGGGUUCGAUCCCCGGCA---AGG 63
chr-3.trna203-Asp-GTC   CCGGGUUCGAUCCCCGGCAACGGCG 84
chr-7.trna15-Asp-GTC    CCGGGUUCGAUCCCCGGCAACGGCG 84
chr-7.trna633-Asp-GTC   CCGGGUUCGAUCCCCGGCAACGGCG 84
                        .........70........80....

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