```
                                 ((.(((((..((((.....................)))).(((((.......)))))).....
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-6.trna80-Asp-ATC     AG-GAAAAUAGCUCAG----------UUGGUUAGAGUGAUGGUCCAUCAUGCCAGAAGUC 49
chr-5.trna344-Asp-GTC    GU-CGUUGUAGUAUAG----------UGGUAAGUAUUCCCACUUGUCACGUGGG-UGAC 47
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-6.trna98-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-2.trna447-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-3.trna12-Asp-GTC     GU-CGUUGUAGUAUAG----------UGGUAAGUAUUCCCGCCUGUCACGCGGG-UGAC 47
chr-3.trna13-Asp-GTC     GU-CGUUGUAGUAUAG----------UGGUAAGUAUUCCCGCCUGUCACGCGGG-UGAC 47
chr-3.trna249-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-3.trna271-Asp-GTC    GU-CGUUGUAGUAUAG----------UGGUAAGUAUUCCCGCCUGUCACGCGGG-UGAC 47
chr-3.trna272-Asp-GTC    GU-CGUUGUAGUAUAG----------UGGUAAGUAUUCCCGCCUGUCACGCGGG-UGAC 47
chr-3.trna351-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.trna139-Asp-GTC    CU-CGUUGUAGUAUAG----------UGGUAAGUAUUCCCGCCUGUCACGCGGG-UGAC 47
chr-7.trna4-Asp-GTC      GU-CGUUGUAGUAUAG----------UGGUAAGUAUUCCCGCCUGUCACGCGGG-UGAC 47
chr-7.trna640-Asp-GTC    ACUUGUUGUAGUAUAG----------UGGUAAGUAUUCCCGCCUGUCACGCGGG-UGAC 48
chr-7.trna637-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-2.trna10-Asp-GTC     GC-GAGCGUAGUUCAA----------UGGUAA-AAUAUCUCCUUGUCAAGGAGA-AGAU 46
chr-7.trna404-Asp-ATC    GC-CCCUAUCGUCUAG----------UGGUUCAGGACAUCUCUCUAUCAAGGAGGCAG-C 48
chr-7.trna406-Asp-ATC    GC-CCCUAUCGUCUAG----------UGGUUCAGGACAUCUCUCUAUCAAGGAGGCAG-C 48
chr-7.trna51-Asp-GTC     CU-------AGUAUAG----------UGGUAAGUAUUCCCGCCUGUCACGCGGG-UGAC 41
chr-3.trna203-Asp-GTC    GGAUAUAAGUGAACAGUCAAAAAAGUUUGGUAAGUAUUCCCGCCUGUCACGCGG-UGAC 59
chr-7.trna15-Asp-GTC     GGAUAUAAGUGAACAGUCAAAAAAGUUUGGUAAGUAUUCCCGCCUGUCACGCGG-UGAC 59
chr-7.trna633-Asp-GTC    GGAUAUAAGUGAACAGUCAAAAAAGUUUGGUAAGUAUUCCCGCCUGUCACGCGG-UGAC 59
chr-4.trna159-Asp-ATC    CCACUGCUCAGU---------------UGGUAA-AGCACAAAGCUAUCAACCUUGUGGAC 44
chr-4.trna160-Asp-ATC    CCACUGCUCAGU---------------UGGUAA-AGCACAAAGCUAUCAACCUUGUGGAC 44
                         .........10........20........30........40........50.........
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                         (((((.......)))))))))))).
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
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chr-4.trna43-Asp-GTC     GCGGGUUCGAACCCCGUUUUCCCCG 74
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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-6.trna80-Asp-ATC     AUGGGUUUGAA-CCUAUUUUCCCUG 73
chr-5.trna344-Asp-GTC    CCGGGUUUGAUCCUCGGCAACGGCG 72
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-6.trna98-Asp-GTC     CCGGGUUCGAUCCCCGGCAACGGCG 72
chr-2.trna2-Asp-GTC      CCGGGUUCGAUCCCCGGCAACGGCG 72
chr-2.trna54-Asp-GTC     CCGGGUUCGAUCCCCGGCAACGGCG 72
chr-2.trna447-Asp-GTC    CCGGGUUCGAUCCCCGGCAACGGCG 72
chr-7.trna16-Asp-GTC     CCGGGUUCGAUCCCCGGCAACGGCG 72
chr-7.trna33-Asp-GTC     CCGGGUUCGAUCCCCGGCAACGGCG 72
chr-3.trna12-Asp-GTC     CCGGGUUCGAUCCCCGGCAACGGCG 72
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chr-3.trna249-Asp-GTC    CCGGGUUCGAUCCCCGGCAACGGCG 72
chr-7.trna638-Asp-GTC    CCGGGUUCGAUCCCCGGCAACGGCG 72
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chr-7.trna4-Asp-GTC      CCGGGUUCGAUCCCCGGCUCCGGCG 72
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chr-3.trna507-Asp-GTC    CCGGGUUCGUUCCCCGGCAACGGCG 73
chr-5.trna468-Asp-GTC    CCGGGUUGGAUCCCCGGCAACGGCG 73
chr-2.trna10-Asp-GTC     ACGGGUUCGAUUCCCACCGCUCGCC 71
chr-7.trna404-Asp-ATC    GGGCAUUCGACUUCCCCUGGGGGUA 73
chr-7.trna406-Asp-ATC    GGGCAUUCGACUUCCCCUGGGGGUA 73
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
chr-4.trna159-Asp-ATC    GUGGGUUCAAGCCCCAUGAGGGGGG 69
chr-4.trna160-Asp-ATC    GUGGGUUCAAGCCCCAUGAGGGGGG 69
                         .........70........80....
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