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#!/usr/bin/perl -w

use strict;

if ($#ARGV != 0) {
    die "usage: $0 counts\n";
}

open (IN, "<$ARGV[0]") || die $!;

my @data=();
my $rate_sum=0;
my $count_sum=0;
while (<IN>) {
    if (/^#/) {
        print;
        next;
    }
    chomp;
    my @tmp=split(/\t/);
    if ($tmp[0] eq 'Geneid') {
        $tmp[6]='Count';
        print join("\t", @tmp), "\tTPM\tFPKM\n";
#       print "$_\tTPM\tFPKM\n";
        next;
    }
    my $rpk=1000*$tmp[6]/$tmp[5]; #RPK
    $rate_sum+=$rpk;
    $count_sum+=$tmp[6];
#   push(@tmp, $rate);
    push (@data, [@tmp]);
}
#print "rate_sum=$rate_sum\n";

foreach (@data) {
    my $rpk=1000*${$_}[6]/${$_}[5];
    my $tpm=1000000*$rpk/$rate_sum;
    my $fpm=1000000*${$_}[6]/$count_sum;
    my $fpkm=1000*$fpm/${$_}[5];
    print join("\t", @{$_}), "\t$tpm\t$fpkm\n";
}

```