Caleb Piekstra, Shaun Stice

Lab1

1.

a. 38.3% GC

b. 50.47% GC

c. 47.92% GC

2.

File contents:

> Example file with a short DNA sequence

AAADRFDGBTTTACGAAGXXCvTTCCGGAATTDPOIDFGAEDSFCCAAGGGAGAGXCDFDYTACATAAQWQ

What the function produces:

in FASTA format

3:D

4:R

5:F

6:D

8:B

18:X

19:X

21:v

32:D

33:P

34:O

35:I

36:D

37:F

40:E

41:D

42:S

43:F

55:X

57:D

58:F

59:D

60:Y

68:Q

69:W

70:Q

3.

in FASTA format

atg

tcg

ctt

ggt

ata

cca

ctt

tcc

caa

4.

> DUKZVTYFRQOFJMLZIMQRDXLYGNWNGDXFZOSVMDDWIEDQJGMJWJRVEKMZGXYPDHKZUYAAOSXEWWCSKTLJ

5.

a. Chromosome #5

318357846170656069437160864094251053110983

b. eColi

822886951486816747170331915219802230222466131871

6.

a. Chromosome #5

30984473579162046392990410143114601342313630

b. eColi

913 3270 13385 13489 29691 32535 40812 40874 42869 43447

7. (a-b)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Forward | | | Reverse | | |
| TATACA | TATAGA | TATATA | TATACA | TATAGA | TATATA |
| 706  1688  3572  5056  5113  9939  13533  18927  21500  22861 | 5552  6836  7354  9665  10395  10786  12189  12978  13770  25143 | 444  704  1696  6583  6834  7133  9027  9127  10332  10393 | 2366  5574  6241  9721  10778  12113  16465  16785  24949  25135 | 182  6870  10000  11502  19724  25187  26971  28145  31036  38198 | 5348  6134  6948  7827  8952  9965  9998  10584  11829  12339 |

8.

CCAAT in yeast chr 5

225153520602482638866646689690071167662

9. The most challenging aspect of the lab was the pathways to the sequence files. (Yay escape characters!)