**On project design:**

The same design structure from Group\_A applies here, except with PAmericanOption instead of EuropeanOption, and PAmericanMatrix instead of EuropeanMatrix.

**Outputs:**

B.a and B.b:

Batch 1

Call price:

18.5035

Put price:

3.03106

B.c:

Varying underlying price:

2.85496

3.2594

3.67846

4.11137

4.55748

5.0162

5.48702

5.96946

6.4631

6.96756

7.48248

8.00755

8.54247

9.08696

9.64076

10.2036

10.7754

11.3557

11.9446

12.5416

13.1468

13.7599

14.3808

15.0092

15.6452

16.2884

16.9389

17.5965

18.2611

18.9325

19.6106

20.2954

20.9868

21.6845

22.3887

23.0991

23.8157

24.5384

25.2672

26.0019

26.7424

B.d:

Call price (varying strike price and volatility):

35.2881

36.3152

37.6087

39.0731

40.6464

42.2861

43.9618

Put price (varying strike price and volatility):

20.0377

24.8945

29.9791

35.2425

40.6464

46.1603

51.7602