

# HW7

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Q1

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PS C:\Users\timmy\Desktop\E94101046_作業八>
=== (a) Quadratic Fit ===
y = 6.6912 * x^2 + -1.8837 * x + 3.0864
Error = 0.00525

=== (b) Exponential Fit ===
y = 21.4445 * e^(0.3985 * x)
Error = 94.98302

=== (c) Power Fit ===
y = 6.2390 * x^2.0196
Error = 0.01172
```

Q2

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最小平方二次多項式係數為：
a0      =  0.498279
a1      =  0.326548
a2      = -0.232631
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近似多項式為：P2(x) = 0.498279 + 0.326548·x + -0.232631·x2
=====
```

Q3

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(b)  $\int_0^1 S_4(x) dx$   $\approx$  0.1976721965
(c)  $\int_0^1 x^2 \sin(x) dx$   $\approx$  0.2232442755
(c) 積分誤差  $|\int S_4 - \int f|$   $\approx$  0.0255720790
(d) 離散平方誤差  $E(S_4)$   $\approx$  0.0774015759
=====
```