

Worksheet 1/26/2026

- 1) Find the equation of the parabola that passes through three points $(-1, 1), (0, -1), (2, 2)$.
- 2) Find the polynomial of degree at most three that agrees with the function $f(x) = 2^x$ at $x = -1, 0, 1, 2$.
- 3) Use the polynomial found in the previous problem to approximate $2^{2/3}$.

4) Find the quadratic polynomial that agrees with $f(x) = \frac{2^x}{x}$ at $x = 2, 3, 4$.

5) Use the polynomial found in the previous problem to approximate the integral $\int_2^4 \frac{2^x}{x} dx$.