

(1) [5 points] Solve $2^{2x-1} = 4$.

(2) [5 points] Solve $\log_3(x^2 + 1) = 2$.

(3) [5 points] Write as a single simplified logarithm:

$$8 \log_2 \sqrt{3x - 2} - \log_2 \left(\frac{4}{x} \right) + \log_2 4$$