

$$13. y = 2x^3 - x \text{ AT } (-1, -1)$$

FINDING EQUATION OF TANGENT LINE

① FIND DERIVATIVE

$$y' = 2 \cdot 3x^2 - 1$$

$$y' = 6x^2 - 1$$

② CHANGE y' TO m , PLUG IN x PART OF GIVEN POINT AND SIMPLIFY

$$m = 6(-1)^2 - 1$$

$$m = 6(1) - 1$$

$$m = 6 - 1$$

$$m = 5$$

③ INTO $y = mx + b$, PLUG IN GIVEN POINT FOR x, y AND m FROM STEP ② AND SOLVE FOR b

$$y = mx + b$$

$$-1 = 5(-1) + b$$

$$-1 = -5 + b$$

$$-1 + 5 = b$$

$$4 = b$$

④ WRITE ANSWER

$$y = mx + b$$

$$y = 5x + 4$$