$-3x^2$

2. $y = \frac{+x^3}{2}$

$x_1 = -1$

$y_1 = -\frac{1}{2}$

$\frac{dy}{dx} = \frac{+3x^2}{2}$

$\left.\frac{dy}{dx}\right|_{x=-1} = \frac{+3(-1)^2}{2} = \frac{3}{2} \therefore m = \frac{3}{2}$

For tangent

$y - y_1 = m(x - x_1)$

$y - (-\frac{1}{2}) = \frac{3}{2}(x - (-1))$

$y + \frac{1}{2} = \frac{3}{2}(x+1)$

multiply b/ho by 2

$2y + 1 = 3x + 3$

$2y + 1 - 3x - 3 = 0$

$2y - 3x - 2 = 0$ {for tangent}

for normal

$y - y_1 = -\frac{1}{m}(x - x_1)$

$y - (-\frac{1}{2}) = \frac{1}{\frac{3}{2}}(x - (-1))$

$y + \frac{1}{2} = -\frac{2}{3}(x+1)$

$3y + \frac{3}{2} = -2x - 2$

$3y - 3x + \frac{3}{2} + 3 = 0$

$6y + 4x + 7 = 0$. (for normal)