

(1)

$$i) y = 5x^4 + 5x^2 + 3x - 19$$

$$y = \frac{d}{dx}(5x^4 + 5x^2 + 3x - 19)$$

$$y = \frac{d}{dx}(5x^4) + \frac{d}{dx}(5x^2) + \frac{d}{dx}(3x) - \frac{d}{dx}(19)$$

$$y = 5 \times 4x^3 + 5 \times 2x + 3 - 0$$

$$y = 20x^3 + 10x + 3$$

$$ii) y = (2x+5)(x-1)$$

$$y = 2x^2 - 2x + 5x - 5$$

$$y = 2x^2 + 3x - 5$$

$$iii) y = \frac{1}{x^2} - \cos 5x$$

~~$$y = \frac{1}{x^2} - \cos(5x)$$~~
$$y = \frac{1}{x^2} - \frac{\cos(5x)}{1}$$

$$y = \frac{1}{x^2} - \frac{x^2 \times \cos(5x)}{x^2 \times 1}$$

$$y = \frac{1}{x^2} - \frac{x^2 \times \cos(5x)}{x^2}$$

$$y = \frac{1 - x^2 \times \cos(5x)}{x^2}$$