

- (א) $\frac{1}{x^2} = x^{-2}$ $\frac{d}{dx} x^{-2} = -2x^{-3} = -\frac{2}{x^3}$ $\frac{d}{dx} \frac{1}{x^2} = -\frac{2}{x^3}$
- (ב) $\frac{1}{x^3} = x^{-3}$ $\frac{d}{dx} x^{-3} = -3x^{-4} = -\frac{3}{x^4}$ $\frac{d}{dx} \frac{1}{x^3} = -\frac{3}{x^4}$
- (ג) $\frac{1}{x^4} = x^{-4}$ $\frac{d}{dx} x^{-4} = -4x^{-5} = -\frac{4}{x^5}$ $\frac{d}{dx} \frac{1}{x^4} = -\frac{4}{x^5}$

(8) שאלה 8

- (א) $y = x^2 + 3x - 5$ $\frac{d}{dx} (x^2 + 3x - 5) = 2x + 3$
- (ב) $y = \frac{1}{x} = x^{-1}$ $\frac{d}{dx} x^{-1} = -x^{-2} = -\frac{1}{x^2}$
- (ג) $y = \sqrt{x} = x^{1/2}$ $\frac{d}{dx} x^{1/2} = \frac{1}{2} x^{-1/2} = \frac{1}{2\sqrt{x}}$
- (ד) $y = \frac{1}{\sqrt{x}} = x^{-1/2}$ $\frac{d}{dx} x^{-1/2} = -\frac{1}{2} x^{-3/2} = -\frac{1}{2x\sqrt{x}}$

$y = x^3 + 2x^2 - 5x + 7$ $\frac{d}{dx} (x^3 + 2x^2 - 5x + 7) = 3x^2 + 4x - 5$

(9) שאלה 9

$y = \frac{1}{x^2} = x^{-2}$ $\frac{d}{dx} x^{-2} = -2x^{-3} = -\frac{2}{x^3}$

בשאלה 8, חשבו את הנגזרת של $y = \frac{1}{x^2}$ ב-31.12.2002