Derivate

Andrea Canale

August 8, 2023

1 Es 617 - Pag 307

$y_0 = x^4 - 5x^3 - 1$
$\quad y_1 = 4x^3 - 15x^2$

2 Es 618 - Pag 307

$y_0 = x^3(x^2 - 1)$
$\quad y_1 = 3x^2(x^2 - 1) + x^3(2x)$
$\quad y_1 = x^2(3(x^2 - 1) + x(2x))$
$\quad y_1 = x^2(3x^2 - 3 + 2x^2)$
$\quad y_1 = x^2(5x^2 - 3)$

3 Es 619 - Pag 307

$y_0 = \frac{6}{x} - 1$
$\quad y_1 = \frac{-6}{x^2}$

4 Es 621 - Pag 307

$y_0 = \frac{x^2}{x+2}$
$\quad y_1 = \frac{2x(x+2) - x^2(1)}{(x+2)^2}$
$\quad y_1 = \frac{2x^2 + 4x - x^2}{(x+2)^2}$
$\quad y_1 = \frac{x^2 + 4x}{(x+2)^2}$

5 Es 628 - Pag 307

$y_0 = e^{2x^3 - 3}$
$\quad y_1 = e^{2x^3 - 3} \cdot 6x^2$

6 Es 629 - Pag 307

$y_0 = x(e^{2x} - 1)$
$\quad y_1 = 1(e^{2x} - 1) + x(e^{2x} \cdot 2)$
$\quad y_1 = e^{2x} - 1 + x(e^{2x} \cdot 2)$

7 Es 635 - Pag 307

$$y_0 = (x^2 - 1)^3$$
$$y_1 = 3(x^2 - 1)^2 \cdot (2x)$$

8 Es 636 - Pag 307

$$y_0 = \sin(\cos(x))$$
$$y_1 = \cos(x) \cdot -\sin(x)$$

9 Es 639 - Pag 307

$$y_0 = (\ln(x) - x)^2$$
$$y_1 = 2(\ln(x) - x) \cdot (\tfrac{1}{x} - 1)$$

10 Es 640 - Pag 307

$$y_0 = x tan^2 x$$
$$y_0 = x^2(\tan^2)$$
$$y_0 = x^2(tan^2)$$
$$y_1 = 2x(tan^2) \cdot x^2(2tan)$$
$$y_1 = x(2(tan^2) + 2xtan)$$