

FICHA 1 DERIVADAS

$$12 \rightarrow y = \frac{1}{x^{-4}} = x^4 \quad y' = 4x^3$$

$$13 \rightarrow y = \frac{1}{x^{-6}} = x^6 \quad y' = 6x^5$$

$$14 \rightarrow y = -\frac{1}{x^{-2}} = -x^2 \quad y' = -2x$$

$$15 \rightarrow y = -x^{-7} \quad y' = -7x^{-8}$$

$$16 \rightarrow y = -\frac{1}{x^4} = -x^{-4} \quad y' = -4x^{-5}$$

$$17 \rightarrow y = -x^3 \quad y' = -3x^2$$

$$18 \rightarrow y = \frac{x^{-2}}{x^3} = x^{-5} \quad y' = -5x^{-6}$$

$$19 \rightarrow y = -\frac{x^5}{x^2} = -x^3 \quad y' = -3x^2$$

$$20 \rightarrow y = -\frac{x^{-3}}{x^{-7}} = x^4 \quad y' = 4x^3$$

$$33 \rightarrow y = -5x^{-2} \quad y' = 10x^{-3}$$

$$34 \rightarrow y = -6x^{-1} \quad y' = 6x^{-2}$$

$$35 \rightarrow y = \frac{5}{x^2} = 5x^{-2} \quad y' = -10x^{-3}$$

$$36 \rightarrow y = \frac{3}{2x^3} = \frac{3}{2}x^{-3} \quad y' = -\frac{9}{2}x^{-4}$$

$$37 \rightarrow y = \frac{-1}{5x} = -\frac{1}{5}x^{-1} \quad y' = \frac{1}{5}x^{-2}$$

$$38 \rightarrow y = \frac{4x}{5x^5} = \frac{4}{5}x^{-4} \quad y' = -\frac{16}{5}x^{-5}$$

$$39 \rightarrow y = \frac{-3x^{-2}}{2x^4} = -\frac{3}{2}x^{-6} \quad y' = 9x^{-7}$$

$$40 \rightarrow y = 5 \quad y' = 0$$

$$41 \rightarrow y = -7 \quad y' = 0$$

$$42 \rightarrow y = 2 \quad y' = 0$$

$$43 \rightarrow y = -10 \quad y' = 0$$

$$52 \rightarrow y = 7x^3 \sqrt[5]{x^4} = 7x^3 \cdot x^{4/5} = 7x^{19/5}$$

$$53 \rightarrow y = -3 \frac{\sqrt[3]{x} \cdot \sqrt{x^5}}{\sqrt{x}} = -3 \cdot \frac{x^{1/3} \cdot x^{5/2}}{x^{1/2}} = -3x^{7/3}$$

$$54 \rightarrow y = \frac{3x^3}{2\sqrt{x^3}} = \frac{3}{2} \cdot x^{3-3/2} = \frac{3}{2}x^{3/2}$$

$$55 \rightarrow y = -\frac{4\sqrt[4]{x^3}}{3x} = -\frac{4}{3}x^{3/4-1} = -\frac{4}{3}x^{-1/4}$$

$$56 \rightarrow y = 5\sqrt{x\sqrt[3]{x^2}} = 5\left(x^{1+2/3}\right)^{1/2} = 5\left(x^{5/3}\right)^{1/2} = 5x^{5/6}$$

$$57 \rightarrow y = -\sqrt[5]{x^2\sqrt{x^3}} = -\left(x^{2+3/2}\right)^{1/5} = -x^{7/10}$$

$$y' = 7 \cdot \frac{19}{5} x^{14/5} = \frac{133}{5} \sqrt[5]{x^{14}} = \frac{133}{5} x^2 \sqrt[5]{x^4}$$

$$y' = -3 \cdot \frac{7}{3} x^{4/3} = -7 \sqrt[3]{x^4} = -7x \sqrt[3]{x}$$

$$y' = \frac{3}{2} \cdot \frac{3}{2} x^{1/2} = \frac{9}{4} \sqrt{x}$$

$$y' = -\frac{4}{3} \cdot \frac{1}{4} x^{-5/4} = -\frac{1}{3} \cdot \frac{1}{\sqrt[4]{x^5}} = -\frac{1}{3\sqrt[4]{x^5}}$$

$$y' = 5 \cdot \frac{5}{6} x^{-1/6} = \frac{25}{6\sqrt[6]{x}}$$

$$y' = -\frac{7}{10} x^{-3/10} = -\frac{7}{10\sqrt[10]{x^3}}$$