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Nombre del trabajo: "DERIVADAS"

PASIÓN POR EDUCAR

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Grupo: A

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1- $F(x) = \operatorname{arccosec} x$

$$\frac{d(\operatorname{arccosec} u)}{dx} = \frac{x}{\sqrt{(x)^2-1}} = \frac{x}{x\sqrt{x^2-1}} = \frac{1}{\sqrt{x^2-1}}$$

2- $F(x) = \operatorname{arccosec} 5x$

$$\frac{d(\operatorname{arccosec} 5u)}{dx} = \frac{5}{5\sqrt{(5x)^2-1}} = \frac{5}{5\sqrt{25x^2-1}} = \frac{1}{\sqrt{25x^2-1}}$$

3- $F(x) = \operatorname{arccosec} 7x$

$$\frac{d(\operatorname{arccosec} 7u)}{dx} = \frac{7}{7\sqrt{(7x)^2-1}} = \frac{7}{7\sqrt{49x^2-1}} = \frac{1}{\sqrt{49x^2-1}}$$

4- $F(x) = \operatorname{arccosec} x^4$

$$\frac{d(\operatorname{arccosec} u^4)}{dx} = \frac{4x^3}{4x^3\sqrt{(x^4)^2-1}} = \frac{4x^3}{4x^3\sqrt{x^8-1}} = \frac{1}{\sqrt{x^8-1}}$$

5- $F(x) = \operatorname{arccosec} 2x^7$

$$\frac{d(\operatorname{arccosec} 2u^7)}{dx} = \frac{128x^6}{128x^6\sqrt{(2x^7)^2-1}} = \frac{128x^6}{128x^6\sqrt{4x^{14}-1}} = \frac{1}{\sqrt{4x^{14}-1}}$$

6- $F(x) = \operatorname{arccosec} 6x^6$

$$\frac{d(\operatorname{arccosec} 6u^6)}{dx} = \frac{46,656x^5}{46,656x^5\sqrt{(6x^6)^2-1}} = \frac{46,656x^5}{46,656x^5\sqrt{36x^{12}-1}} = \frac{1}{\sqrt{36x^{12}-1}}$$

7- $F(x) = \operatorname{arccosec} \frac{3x^4}{7}$

$$\frac{d(\operatorname{arccosec} \frac{3u^4}{7})}{dx} = \frac{\frac{12x^3}{7}}{\frac{12x^3}{7}\sqrt{(\frac{3x^4}{7})^2-1}} = \frac{\frac{12x^3}{7}}{\frac{12x^3}{7}\sqrt{\frac{9x^8-1}{49}}} = \frac{1}{\sqrt{9x^8-1}}$$