$$f'(x) = \frac{-6}{3\sqrt{x}} - \sec x \cdot \tan x$$

$\dfrac{d}{dx}(\cot x) = -\csc^2 x$	7. Find f'(x) for $f(x) = \cot x - \dfrac{3}{\sqrt{x}}$ power rule

$$f(x) = \cot x - 3x^{-\frac{1}{2}}$$

$$f'(x) = -\csc^2 x + \frac{3}{2}x^{-\frac{3}{2}}$$

$$\boxed{f'(x) = -\csc^2 x + \frac{3}{2\sqrt{x^3}}}$$

Angelina
Zamer
3.5

Exit Ticket Upload: Given f(x), find f'(x)

1. f(x) = sin x + 4eˣ

$u = 4$ $v = e^x$
$u' = 0$ $v' = e^x$

$$f'(x) = \cos x + 4e^x + 0e^x$$

$$\boxed{f'(x) = \cos x + 4e^x}$$

2. f(x) = sec x tan x

$u = \sec x$ $v = \tan x$
$u' = \sec x \tan x$ $v' = \sec^2 x$

$$f'(x) = \sec x(\sec^2 x) + \sec x \tan x(\tan x)$$

$$\boxed{f'(x) = \sec x(\sec^2 x + \tan^2 x)}$$

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