

OIL CONSERVATION COMMISSION

STATE OF NEW MEXICO

SEDIMENT OIL DESTRUCTION PERMIT

Operator Pan American Petroleum Corporation hereby requests authority
to destroy the following described sediment oil:

Name of lease Navajo Tribal "E" Battery No. 1

Location of lease SW/4 of Section 21, T-29-N. R-14-W

Type of sediment oil (Pit oil, tank bottoms, etc.) Pit Oil

Estimated gross volume, barrels 15 barrels

Reason why sediment oil cannot be salvaged: Pit oil consists of residue of treated oil
which is not merchantable.

Operator Pan American Petroleum Corporation

By ORIGINAL SIGNED BY
L. R. LURNER

Title Administrative Clerk

Date January 25, 1961

Approved 1-26 19 61

New Mexico Oil Conservation Commission

By [Signature]

Title [Signature]



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

Find the derivative of $f(x)$.

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

Use the derivative to find the slope of the tangent line to the curve $y = f(x)$ at the point $(1, 1)$.

$$\text{Slope} = f'(1) = -\frac{2}{1^3} = -2$$

Write the equation of the tangent line to the curve $y = f(x)$ at the point $(1, 1)$.

$$y - 1 = -2(x - 1) \implies y = -2x + 3$$

Verify that the line $y = -2x + 3$ is tangent to the curve $y = f(x)$ at the point $(1, 1)$.

Check that the line passes through the point $(1, 1)$ and that its slope is equal to the derivative of $f(x)$ at $x = 1$.

The line $y = -2x + 3$ passes through $(1, 1)$ and has a slope of -2 , which matches $f'(1)$. Therefore, the line is tangent to the curve at $(1, 1)$.

Graph the curve $y = f(x)$ and the tangent line $y = -2x + 3$ on the same coordinate plane.

The graph shows the curve $y = \frac{1}{x^2}$ and the tangent line $y = -2x + 3$ intersecting at the point $(1, 1)$.

Find the derivative of the function $f(x) = x^3 - 2x^2 + 5x - 7$.

$$f'(x) = 3x^2 - 4x + 5$$

Use the derivative to find the slope of the tangent line to the curve $y = f(x)$ at the point $(2, 1)$.

$$\text{Slope} = f'(2) = 3(2)^2 - 4(2) + 5 = 12 - 8 + 5 = 9$$