## Title: sample code

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Some text

```
x = 1
# a comment
y = x+1
## this is another comment
```

$$a = b + c$$
$$+ d + e$$
$$f = g - h$$

As shown in Equation, Euler's identity is a fundamental mathematical relationship.

## 1 Einstein's Equation E=m c^2

This is markdown. Consider:

$$E = mc^2 (1)$$

Where Equation (1) demonstrates the relationship between energy e, mass m, and the speed of light c.

```
m = 1
c = 3e8
E = m*c^2
```

Another multiline equation is as follows:

$$Ax = b$$

$$x \ge 0$$
(2)

Here, Equation (2) represents a system of linear equations with non-negativity constraints.