

## No numbering

When `numbering` is set to `none` (the default).

Equations are not numbered at all.

$$M(t) = E(e^{tX}) = \sum_{x \in S} e^{tx} f(x)$$

We can still label equations, so that we can query them, for example. Using the special label `<*>` is no different than any other label. But trying to reference them will throw an error, as numbering is not enabled.

$$P(A \cup B) = P(A) + P(B) - P(A \cap B)$$

$$V(aX + bY) = a^2 V(X) + b^2 V(Y)$$

```
#context query(<nno:eq1>)
#context query(<*>)
```

$$a + b$$

$$\begin{aligned} x &= y \\ &= z \end{aligned}$$

```
(

equation(
    block: true,
    numbering: none,
    numbering-mode: "equation",
    number-align: end + horizon,
    supplement: [Equation],
    body: sequence(
        [x],
        [ ],
        align-point(),
        [=],
```

```
    [ ],
    [y],
    [ ],
    linebreak(),
    [ ],
    align-point(),
    [=],
    [ ],
    [z],
),
),
)
(
equation(
    block: false,
    numbering: none,
    numbering-mode: "equation",
    number-align: end + horizon,
    supplement: [Equation],
    body: sequence([a], [+], [b]),
),
)
```

Labels within an equation don't do anything, and just have their `repr` shown.

$$x \text{ <a>, } y \text{ <*>}$$

## Numbering by equation

When `numbering-mode` is set to `"equation"` (the default) and `numbering` is not `none`.

Every equation is numbered by default.

$$a + b = c \tag{1}$$

You can attach a label to an equation, so that you can reference it later. See Equation 2.

$$a^2 + b^2 = c^2 \quad (2)$$

If you don't want to label a specific equation, you can attach the special label `<*>` to it.

$$a^n + b^n = c^n$$

We can give two equations the same number by attaching the same label to both of them.

$$0 = ax^2 + bx + c \quad (3)$$

has solution

$$x = \frac{-b + \sqrt{b^2 - 4ac}}{2a}. \quad (3)$$

Referencing this equation still works, despite the label being used twice: Equation 3. It'll link to the first equation with the label.

The counter will continue afterwards, as expected.

$$ax + by = c \quad (4)$$

We can even give another equation much later the same label, and the numbering will still work.

$$x = \frac{-b - \sqrt{b^2 - 4ac}}{2a} \quad (3)$$

Labels within an equation don't do anything, and just have their `repr()` shown.

$$x \text{ <a>, } y \text{ <*>} \quad (5)$$

## Numbering by line

When `numbering-mode` is set to "line" and `numbering` is not `none`.

## Numbering by label

When `numbering-mode` is set to "label" and `numbering` is not `none`.

## Numbering by reference

When `numbering-mode` is set to "reference" and `numbering` is not `none`.