Without grid:

(left) 
$$\forall \varepsilon > 0, \, \exists \delta > 0, \quad |P(x) - P(\delta)| < \varepsilon \qquad \qquad \text{(right)}$$

Thus, this is intertext, keeping alignment

$$\lim_{t \to 0} f(t) = f(x)$$
 (blah blah)

Inside grid, Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magnam aliquam quaerat.

left aligned

$$x(2x-1) = 0$$
 (factorize  $x$ )

$$\therefore x = 0, \frac{1}{2}$$

intertext,

$$Q_t(a) = \frac{\sum_{i=1}^{t-1} \mathbbm{1}_{A_i = a} X_i}{\sum_{i=1}^{t-1} \mathbbm{1}_{A_i = a}} = \hat{\mu}_a(t-1) \tag{abc}$$

$$\text{for } \mathcal{E}^2_{\operatorname{SG}} \colon \quad \frac{1}{2} \mathbb{P}(|X| - \mathbb{E}[X] \geq \varepsilon) \leq \exp\left(-\frac{\varepsilon^2}{2\sigma^2}\right) \quad (\operatorname{sgc})$$

$$A_t = \argmax_{a \in \mathcal{A}} Q_t(a)$$

thus, this is a very long multiline intertext that is auto spaced Lorem ipsum dolor sit amet, consectetur adipiscing elit.:

$$A_t = 2$$
 (2nd arm in  $\mathcal{A}$ )

I can right flush text that takes up vertical space too

$$\therefore t = 5$$

From Equation (sgc), we know that...

As per Equation (abc) above,

For all  $a \in \mathcal{A}$ ,

$$Q_t(a) \longrightarrow \mu_a$$
 (abc)

Now, Equation (abc) refers to the equation right above this paragraph, instead of the first one.

$$Q_t(a) \longrightarrow 0$$
 (abc)

Now I can refer to both the new Equation (abc) and the old Equation (abc). I can also link to my equation using a **custom reference text**