2. Simplificar las siguientes expresiones:

(a) $\left(\dfrac{-3}{\frac{4}{5}+1}\right)^{-1} \cdot \left(\dfrac{4}{5}-1\right)+\dfrac{1}{3}$

$$\left(\frac{-3}{4/5+1}\right)^{-1}\cdot\left(\frac{4}{5}-1\right)+\frac{1}{3} = \left(\frac{4/5+1}{-3}\right)\cdot\left(\frac{4}{5}-1\right)+\frac{1}{3} = \left(\frac{3}{\frac{9}{5}}\right)\cdot\left(\frac{-1}{5}\right)+\frac{1}{3} = \left(\frac{-3}{5}\right)\cdot\left(\frac{-1}{5}\right)+\frac{1}{3} = \frac{3}{25}+\frac{1}{3} = \frac{34}{75}$$

(b) $\dfrac{a}{2\pi-6}(\pi-3)^2-\dfrac{2a(\pi^2-9)}{\pi-3}$

$$\frac{a}{2\pi-6}(\pi-3)^2-\frac{2a(\pi^2-9)}{\pi-3} = \frac{a(\pi-3)^2-4a(\pi^2-9)}{2\pi-6} = \frac{a(\pi^2-6\pi+9)-4a(\pi^2-9)}{2\pi-6} = \frac{a\pi^2-6a\pi+9a-4a\pi^2-36a}{2\pi-6}$$

$$= \frac{-3a\pi^2-6a\pi-27a}{2\pi-6}$$