$A := x \to \frac{x^2}{16} + \frac{1}{2} \cdot \frac{(5-x)^2}{3^2} \cdot \frac{\mathrm{sqrt}(3)}{2}$

$$A := x \mapsto \frac{x^2}{16} + \frac{(5-x)^2 \cdot \sqrt{3}}{36} \quad \textbf{(1)}$$

$expand(A(x))$

$$\frac{x^2}{16} + \frac{\sqrt{3}\, x^2}{36} - \frac{5\sqrt{3}\, x}{18} + \frac{25\sqrt{3}}{36} \quad \textbf{(2)}$$

$A(0)$

$$\frac{25\sqrt{3}}{36} \quad \textbf{(3)}$$

$evalf(\%)$

$$1.202813061 \quad \textbf{(4)}$$

$A(5)$

$$\frac{25}{16} \quad \textbf{(5)}$$

$evalf(\%)$

$$1.562500000 \quad \textbf{(6)}$$

$convert\left(\frac{(3 \cdot x - 8)}{x-3}, parfrac, x\right)$

$$3 + \frac{1}{x-3} \quad \textbf{(7)}$$

$?parfrac$