

50 a.
$$\begin{aligned} h(x) &= 3(x^2 - \frac{1}{3}x) + 6 = 3[x^2 - \frac{1}{3}x + \left(\frac{1}{6}\right)^2 - \left(\frac{1}{6}\right)^2] + 6 \\ &= 3[(x - \frac{1}{6})^2 - \frac{1}{36}] + 6 \end{aligned}$$

$$\begin{aligned} h(x) &= 3(x - \frac{1}{6})^2 - \frac{1}{12} + 6 = 3(x - \frac{1}{6})^2 - \frac{1}{12} + \frac{72}{12} \\ &= 3\left(x - \frac{1}{6}\right)^2 + \frac{71}{12}. \end{aligned}$$

b. $j(x) = -5(x^2 - 2x) - 3 = -5(x^2 - 2x + 1^2 - 1) - 3 = -5((x - 1)^2 - 1) - 3.$

$j(x) = -5(x - 1)^2 + 5 - 3$, soit : $j(x) = -5(x - 1)^2 + 2.$