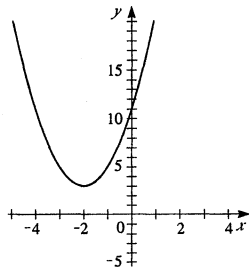


$$22. \quad g(x) = 2x^2 + 8x + 11 = 2(x^2 + 4x) + 11 \\ = 2(x^2 + 4x + 4) + 11 - 8 = 2(x + 2)^2 + 3.$$

Therefore, the minimum value is $g(-2) = 3$.



$$24. \quad h(x) = 3 - 4x - 4x^2 = -4(x^2 + x) + 3 = -4\left(x^2 + x + \frac{1}{4}\right) + 3 + 1 \\ = -4\left(x + \frac{1}{2}\right)^2 + 4.$$

Therefore, the maximum value is $h\left(-\frac{1}{2}\right) = 4$.

