1. Find the domain of the following functions:
   (i). $f(x) = \frac{1}{\sqrt{x^2-5x+4}}$
   (ii). $f(x) = \frac{\sqrt{x+1}}{x-2}$
   (iii). $f(x) = \frac{x^2}{x}$
2. Determine whether the following functions are odd or even:
   (i). $f(x) = \frac{x^2+1}{x^4-2}$
   (ii). $f(x) = x|x|$
3. Determine the domain of $f \circ g$ in each case:
   (i). $f(x) = \frac{1}{x^2}$, $g(x) = \cos x$
   (ii). $f(x) = \sqrt{x-1}$, $g(x) = x^2$
4. Describe how to obtain the graph of $f(x) = x^2 - 4x + 3$ from that of $g(x) = x^2$.
5. $f(x) = mx + b$ is a linear function. $f(0) = 3$ and $f(1) = 2$. Find the expression of $f(x)$.
6. $f(x)$ is a quadratic function. Its graph has vertex at $(1, 2)$ and the y-intercept is $y = -2$. Find the expression of $f(x)$.