1. Find the domain of

\[ f(x) = \frac{x - 1}{x^2 - 5x + 6} \]

The only bad points will be when the denominator os zero. So by factoring the denominator

\[ x^2 - 5x + 6 = 0 \]
\[ (x - 2)(x - 3) = 0 \]

we see that the bad points are \( x = 2 \) and \( x = 3 \). Hence the domain is all reals except for \( x = 2 \) and \( x = 3 \).

2. Let

\[ f(x) = x^2 + 3x - 1 \]

(a) \( f(4) = 4^2 + 3 \cdot 4 - 1 = 27 \)
(b) \( f(x + 2) = (x + 2)^2 + 3(x + 2) - 1 = x^2 + 7x + 9 \)