1. Justify

$$\lim_{x \to 5} \frac{x^2 - 6x + 5}{x - 5} = 4$$

using the "Limits don't care about one point" rule.

2. Compute

$$\lim_{h \to 0} \frac{\sqrt{4 + h} - 2}{h}$$

using the "Limits don't care about one point" rule. Hint: Multiply top and bottom by $\sqrt{4 + h} + 2$ early in the computation.

3. Suppose $f(x) = x\left(1 - \frac{1}{x}\right)$

a) Why is 0 not in the domain of $f(x)$?

b) Sketch the graph of $f(x)$.

c) Compute $\lim_{x \to 0} f(x)$.