1. $b = \frac{3}{7}$

$$F(x) = \begin{cases} 0 & x \in (-\infty, 0> \\ \frac{3}{7}(\frac{x^3}{3} + x^2 + x) & x \in (0, 1) \\ 1 & x \in <1, \infty) \end{cases}$$

2. a)

$$f(x) = \begin{cases} \frac{1}{7}, & -5 < x < 2 \\ 0 & \text{inak} \end{cases}$$

b) $\frac{4}{7}$
c) 0
d) $\frac{6}{7}$
.

3. a) $c = 1$
b) $c = \frac{1}{2}$
c) $c = 1260$

4. a)

$$F(x) = \begin{cases} 0 & x \in (-\infty, 2> \\ \frac{1}{8}x^2 - \frac{1}{2}x + \frac{1}{2} & x \in (2, 4> \\ \frac{-x^2}{8} + \frac{3}{2}x - \frac{7}{2} & x \in (4, 6> \\ 1 & x \in (6, \infty) \end{cases}$$

b) $\frac{3}{4}$

5. a)

$$F(x) = \begin{cases} 0, & x \leq 0 \\ \frac{1}{2}x, & 0 < x \leq 1 \\ 1 - \frac{1}{2x^3} & x > 1 \end{cases}$$

b) 0,60185

6. Rozdelenie času prestoja strojov je dané distribučnou funkciou
a) a=1
b) $f(x) = \lambda.e^{-\lambda.x}, \quad x \geq 0, \quad \lambda > 0$