Brief solutions to selected problems in homework week 07

1. Section 3.8, problem 8:
$$\frac{df^{-1}(y)}{dy}\bigg|_{y=0} = \frac{1}{\frac{df(x)}{dx}\big|_{x=5}} = \frac{1}{6}$$

2. Section 3.8, problem 98:

   Use

   (a) the identity $(\cdots)^n = \left((\cdots)^{\frac{n}{x}}\right)^x$

   (b) Theorem 4

   (c) Theorem 10 of section 2.5

   (d) The function $f(a) = a^x$ is continuous at $a = e$

   to get the answer $= e^x$.