PRACTICE TEST II

20 (1.) $D(p) = \dfrac{1-p}{p}$

a) compute $E(p)$ in terms of p

b) at $p = 3$, what is elasticity?

c) For what p is there unit elasticity

20 (2) sketch the curve $y = 2x + \frac{8}{x} + 2. = f(x)$
Make a table and label min/max, hor/vert asy. inc/dec
and concavity. Find $\lim_{x \to \pm\infty} f(x)$

20 3 a) $x^2+y = x^3+y^2$ Find dy/dx

b) $y = u^2+u-2$, $u = \frac{1}{x}$. Find dy/dx

10 (4.) (a) Set up, but do not evaluate, formula to compute Balance after 2 years on 10 $ at 10%. Comp 3 $\frac{\text{times}}{\text{yr}}$

(b) Same as (a), but now solve exactly, with cont. compounding

10 (5) (a) Find $\frac{1}{9} \ln \left(\frac{\sqrt{b}}{c} \right)^9$ if $\ln b = 6$, $\ln c = -2$

(b) Solve for x if $3^x 2^{2x} = 144$

6 $C(x) = \frac{1}{5}x^2 + 4x + 57$ $\quad p(x) = \frac{1}{4}(36 - x)$

a) compute marginal cost and marginal revenue

b) use marg cost to est. cost of 4^{th} unit

c) find actual cost of 4th unit.