MBA Maths 2009
Practice quiz 1 solutions

Question 1
Fully Factorize

(a) x^2-2x-8

$(x-4)(x+2)$

(b) x^2-6x+9

$(x-3)^2$

(c) $9x^2$+30x+25

$(3x+5)^2$

(d) x^4-16

$(x-2)(x+2)(x^2+4)$

(e) $6x^3$+x^2-2x

$x(3x+2)(2x-1)$

Question 2
Solve by Factorizing

(a) x^2-7x+12=0

$(x-4)(x-3)=0$

$x=4; x=3$

(b) y^2-5y=6

$(y-6)(y+1)=0$

$y=6; y=-1$

(c) t^3=25t

$t(t^2-25)=0$

$t(t-5)(t+5)=0$

$t=0; t=5; t=-5$

(d) $15s^2$-8=-14s

$(5s-2)(3s+4)=0$

$s=2/5; s=-4/3$

(e) 6-x^2=x

$x^2+x-6=0$

$(x-2)(x+3)=0$

$x=2; x=-3$

Question 3
Express as Positive integers

(a) $\dfrac{\left(\sqrt{x}y\right)^3}{y}$

$x^{3/2}y^2$

(b) $\left(\sqrt{xy}\right)^4 x^{-1}y$

xy^3

(c) $\dfrac{120x^2y}{16xy^2}$

$\dfrac{15x}{2y}$

(d) $\left(\dfrac{15x}{72zy}\Big/\dfrac{5}{9y}\right)\Big/\dfrac{5xy}{12z}$

$9/10y$

(e) $\dfrac{\sqrt{12x^4}\sqrt{5x^3}}{\sqrt{15x}}$

$2x^3$

Question 4
Solve for x

(a) $\dfrac{5x-2}{x+1}=0$

$x=2/5$

(b) $\dfrac{4p}{7-p}=1$ (NB p should be x)

$p=7/5$

(c) $\dfrac{1}{x-3}-\dfrac{3}{x-2}=\dfrac{4}{1-2x}$

$x=17/4$

(d) $\dfrac{2x}{x-3}-\dfrac{x+1}{x+2}=1$

$x=-9/7$