

Analytical Methods Acht 16000

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i) $8p^3q^2 - 4p^2q^3 + 2p^3q$
 $2p^2q(4pq - 2q^2 + p)$

ii) $x^2 - y^2$
 $(x-y)(x+y)$

c

i) $x^2 + 12x + 20 = 0$
 $x^2 + 10x + 2x + 20 = 0$
 $x(x+10) + 2(x+10) = 0$
 $(x+10)(x+2) = 0$
 $x+10 = 0$
 $x+2 = 0$
 $x = -10 \quad x = -2$

ii)

$2x^2 + x - 15 = 0$
 $2x^2 + 6x - 5x - 15 = 0$
 $2x(x+3) - 5(x+3) = 0$
 $(x+3)(2x-5) = 0$
 $x+3 = 0$
 $2x-5 = 0$
 $x = -3$
 $x = 2.5$

iii) $x^2 - 400 = 0$
 $(x-20)(x+20) = 0$