Exercise 2J

Question 8:

$7a^3 + 56b^3$

$= 7(a^3 + 8b^3)$

$= 7 [(a)^3 + (2b)^3]$

$= 7 (a + 2b) [a^2 - a\ 2b + (2b)^2]$

Since $a^3 + b^3 = (a + b) (a^2 - ab + b^2)$

$= 7 (a + 2b) (a^2 - 2ab + 4b^2)$.

Question 9:

$x^5 + x^2$

$= x^2(x^3 + 1)$

$= x^2 (x + 1) [(x)^2 - x (1) + (1)^2]$

Since $a^3 + b^3 = (a + b) (a^2 - ab + b^2)$

$= x^2 (x + 1) (x^2 - x + 1)$.

Question 10:

$a^3 + 0.008$

$= (a)^3 + (0.2)^3$

$= (a + 0.2) [(a)^2 - a(0.2) + (0.2)^2]$

Since $a^3 + b^3 = (a + b) (a^2 - ab + b^2)$

$= (a + 0.2) (a^2 - 0.2a + 0.04)$.

Question 11:

$x^6 + y^6$

$= (x^2)^3 + (y^2)^3$

$= (x^2 + y^2) [(x^2)^2 - x^2 (y^2) + (y^2)^2]$

Since $a^3 + b^3 = (a + b) (a^2 - ab + b^2)$

$= (x^2 + y^2) (x^4 - x^2y^2 + y^4)$.

********** END **********