Exercise 2F

Question 11:

$8ab^2 - 18a^3$

$= 2a (4b^2 - 9a^2)$

$= 2a [(2b)^2 - (3a)^2]$

$= 2a (2b + 3a) (2b - 3a)$

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

Question 12:

$3a^3b - 243ab^3$

$= 3ab (a^2 - 81 b^2)$

$= 3ab [(a)^2 - (9b)^2]$

$= 3ab (a + 9b) (a - 9b)$

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

Question 13:

$(a + b)^3 - a - b$

$= (a + b)^3 - (a + b)$

$= (a + b) [(a + b)^2 - 1^2]$

$= (a + b) (a + b + 1) (a + b - 1)$

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

Question 14:

$108a^2 - 3(b - c)^2$

$= 3 [(36a^2 - (b -c)^2]$

$= 3 [(6a)^2 - (b - c)^2]$

$= 3 (6a + b - c) (6a - b + c)$

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

Question 15:

$x^3 - 5x^2 - x + 5$

$= x^2 (x - 5) - 1 (x - 5)$

$= (x - 5) (x^2 - 1)$

$= (x - 5) (x + 1) (x - 1)$

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

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