

#### Exercise 2E

#### Question 9:

$$x (x + y)^{3} - 3x^{2}y (x + y)$$

$$= x (x + y) [(x + y)^{2} - 3xy]$$

$$= x (x + y) (x^{2} + y^{2} + 2xy - 3xy)$$

$$= x (x + y) (x^{2} + y^{2} - xy)$$

# Question 10:

$$x^{3} + 2x^{2} + 5x + 10$$
  
=  $x^{2} (x + 2) + 5 (x + 2)$   
=  $(x^{2} + 5) (x + 2)$ 

## Question 11:

$$x^{2} + xy - 2xz - 2yz$$
  
=  $x (x + y) - 2z (x + y)$   
=  $(x + y) (x - 2z)$ 

### Question 12:

$$a^{3}b - a^{2}b + 5ab - 5b$$

$$= a^{2}b (a - 1) + 5b (a - 1)$$

$$= (a - 1) (a^{2}b + 5b)$$

$$= (a - 1) b (a^{2} + 5)$$

$$= b (a - 1) (a^{2} + 5)$$

### Question 13:

$$8 - 4\alpha - 2\alpha^{3} + \alpha^{4}$$

$$= 4(2 - \alpha) - \alpha^{3} (2 - \alpha)$$

$$= (2 - \alpha) (4 - \alpha^{3})$$

\*\*\*\*\*\*\*\*\*\* END \*\*\*\*\*\*\*\*