



Exercise 2E

Question 9:

$$\begin{aligned} & x(x+y)^3 - 3x^2y(x+y) \\ &= x(x+y)[(x+y)^2 - 3xy] \\ &= x(x+y)(x^2 + y^2 + 2xy - 3xy) \\ &= x(x+y)(x^2 + y^2 - xy) \end{aligned}$$

Question 10:

$$\begin{aligned} & x^3 + 2x^2 + 5x + 10 \\ &= x^2(x+2) + 5(x+2) \\ &= (x^2 + 5)(x+2) \end{aligned}$$

Question 11:

$$\begin{aligned} & x^2 + xy - 2xz - 2yz \\ &= x(x+y) - 2z(x+y) \\ &= (x+y)(x-2z) \end{aligned}$$

Question 12:

$$\begin{aligned} & a^3b - a^2b + 5ab - 5b \\ &= a^2b(a-1) + 5b(a-1) \\ &= (a-1)(a^2b + 5b) \\ &= (a-1)b(a^2 + 5) \\ &= b(a-1)(a^2 + 5) \end{aligned}$$

Question 13:

$$\begin{aligned} & 8 - 4a - 2a^3 + a^4 \\ &= 4(2-a) - a^3(2-a) \\ &= (2-a)(4-a^3) \end{aligned}$$

***** END *****