Factorizations Ex 7.4 Q11

Answer :

$$x^3 - y^2 + x - x^2y^2$$
$$= (x^3 + x) - (x^2y^2 + y^2) \quad [Regrouping\ the\ expressions]$$
$$= x(x^2 + 1) - y^2(x^2 + 1)$$
$$= (x - y^2)(x^2 + 1) \quad [Taking\ (x^2 + 1)\ as\ the\ common\ factor]$$

Factorizations Ex 7.4 Q12

Answer :

$$6xy + 6 - 9y - 4x = (6xy - 4x) + (6 - 9y) \quad [Regrouping\ the\ expressions]$$
$$= 2x(3y - 2) + 3(2 - 3y)$$
$$= 2x(3y - 2) - 3(3y - 2) \quad [\because (2 - 3y) = -(3y - 2)]$$
$$= (2x - 3)(3y - 2) \quad [Taking\ (3y - 2)\ as\ the\ common\ factor]$$

Factorizations Ex 7.4 Q13

Answer :

$$x^2 - 2ax - 2ab + bx$$
$$= (x^2 - 2ax) + (bx - 2ab) \quad [Regrouping\ the\ expressions]$$
$$= x(x - 2a) + b(x - 2a)$$
$$= (x + b)(x - 2a) \quad [Taking\ (x - 2a)\ as\ the\ common\ factor]$$
$$= (x - 2a)(x + b)$$

Factorizations Ex 7.4 Q14

Answer :

$$x^3 - 2x^2y + 3xy^2 - 6y^3$$
$$= (x^3 - 2x^2y) + (3xy^2 - 6y^3) \quad [Grouping\ the\ expressions]$$
$$= x^2(x - 2y) + 3y^2(x - 2y)$$
$$= (x^2 + 3y^2)(x - 2y) \quad [Taking\ (x - 2y)\ as\ the\ common\ factor]$$

Factorizations Ex 7.4 Q15

Answer :

$$abx^2 + (ay - b)x - y = abx^2 + axy - bx - y$$
$$= (abx^2 - bx) + (axy - y) \quad [Regrouping\ the\ expressions]$$
$$= bx(ax - 1) + y(ax - 1)$$
$$= (bx + y)(ax - 1)$$
$$[Taking\ (ax - 1)\ as\ the\ common\ factor]$$

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