Factorizations Ex 7.2 Q10

Answer :

The greatest common factor of the terms a^4b, $3a^2b^2$ *and* $6ab^3$ *of the expression* $a^4b - 3a^2b^2 - 6ab^3$ *is* ab.

Also, we can write $a^4b = ab \times a^3$, $3a^2b^2 = ab \times 3ab$ *and* $6ab^3 = ab \times 6b^2$.

$$\therefore a^4b - 3a^2b^2 - 6ab^3 = ab \times a^3 - ab \times 3ab - ab \times 6b^2$$
$$= ab\left(a^3 - 3ab - 6b^2\right)$$

Factorizations Ex 7.2 Q11

Answer :

The greatest common factor of the terms $2l^2mn$, $3lm^2n$ *and* $4lmn^2$ *of the expression* $2l^2mn - 3lm^2n + 4lmn^2$ *is* lmn.

Also, we can write $2l^2mn = lmn \times 2l$, $3lm^2n = lmn \times 3m$ *and* $4lmn^2 = lmn \times 4n$.

$$\therefore 2l^2nm - 3lm^2n + 4lmn^2 = lmn \times 2l - lmn \times 3m + lmn \times 4n$$
$$= lmn\left(2l - 3m + 4n\right)$$

Factorizations Ex 7.2 Q12

Answer :

The greatest common factor of the terms x^4y^2, x^2y^4 *and* x^4y^4 *of the expression* $x^4y^2 - x^2y^4 - x^4y^4$ *is* x^2y^2.

Also, we can write $x^4y^2 = x^2y^2 \times x^2$, $x^2y^4 = x^2y^2 \times y^2$ *and* $x^4y^4 = x^2y^2 \times x^2y^2$.

$$\therefore x^4y^2 - x^2y^4 - x^4y^4 = x^2y^2 \times x^2 - x^2y^2 \times y^2 - x^2y^2 \times x^2y^2$$
$$= x^2y^2\left(x^2 - y^2 - x^2y^2\right)$$

Factorizations Ex 7.2 Q13

Answer :

The greatest common factor of the terms $9x^2y$ *and* $3axy$ *of the expression* $9x^2y + 3axy$ *is* $3xy$.

Also, we can write $9x^2y = 3xy \times 3x$ *and* $3axy = 3xy \times a$.

$$\therefore 9x^2y + 3axy = 3xy \times 3x + 3xy \times a$$
$$= 3xy(3x + a)$$

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