



#### Factorizations Ex 7.2 Q1

**Answer :**

The greatest common factor of the terms  $3x$  and  $-9$  of the expression  $3x - 9$  is  $3$ .

Now,

$$3x = 3x$$

and

$$-9 = 3 \cdot -3$$

Hence, the expression  $3x - 9$  can be factorised as  $3(x - 3)$ .

#### Factorizations Ex 7.2 Q2

**Answer :**

The greatest common factor of the terms  $5x$  and  $15x^2$  of the expression  $5x - 15x^2$  is  $5x$ .

Now,

$$5x = 5x \times 1$$

and

$$-15x^2 = 5x \times -3x$$

Hence, the expression  $5x - 15x^2$  can be factorised as  $5x(1 - 3x)$ .

#### Factorizations Ex 7.2 Q3

**Answer :**

The greatest common factor of the terms  $20a^{12}b^2$  and  $-15a^8b^4$  of the expression  $20a^{12}b^2 - 15a^8b^4$  is  $5a^8b^2$ .

$$20a^{12}b^2 = 5 \times 4 \times a^8 \times a^4 \times b^2 = 5a^8 \times b^2 \times 4a^4 \text{ and } -15a^8b^4 = 5 \times -3 \times a^8 \times b^2 \times b^2 = 5a^8b^2 \times -3b^2$$

Hence, the expression  $20a^{12}b^2 - 15a^8b^4$  can be factorised as  $5a^8b^2(4a^4 - 3b^2)$

#### Factorizations Ex 7.2 Q4

**Answer :**

The greatest common factor of the terms  $72x^6y^7$  and  $-96x^7y^6$  of the expression  $72x^6y^7 - 96x^7y^6$  is  $24x^6y^6$ .

Now,

$$72x^6y^7 = 24x^6y^6 \times 3y$$

and

$$-96x^7y^6 = 24x^6y^6 \times -4x$$

Hence, the expression  $72x^6y^7 - 96x^7y^6$  can be factorised as  $24x^6y^6(3y - 4x)$ .

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