

EXERCISE 8.2

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Divide:

1. $6x^3y^2z^2$ by $3x^2yz$

Solution:

We have,

$$6x^3y^2z^2 / 3x^2yz$$

By using the formula $a^n / a^m = a^{n-m}$

$$6/3 x^{3-2} y^{2-1} z^{2-1}$$

$$2xyz$$

2. $15m^2n^3$ by $5m^2n^2$

Solution:

We have,

$$15m^2n^3 / 5m^2n^2$$

By using the formula $a^n / a^m = a^{n-m}$

$$15/5 m^{2-2} n^{3-2}$$

$$3n$$

3. $24a^3b^3$ by $-8ab$

Solution:

We have,

$$24a^3b^3 / -8ab$$

By using the formula $a^n / a^m = a^{n-m}$

$$24/-8 a^{3-1} b^{3-1}$$

$$-3a^2b^2$$

4. $-21abc^2$ by $7abc$

Solution:

We have,

$$-21abc^2 / 7abc$$

By using the formula $a^n / a^m = a^{n-m}$

$$-21/7 a^{1-1} b^{1-1} c^{2-1}$$

$$-3c$$

5. $72xyz^2$ by $-9xz$

Solution:

We have,

$$72xyz^2 / -9xz$$

By using the formula $a^n / a^m = a^{n-m}$
 $72/-9 x^{1-1} y z^{2-1}$
 $-8yz$

6. $-72a^4b^5c^8$ by $-9a^2b^2c^3$

Solution:

We have,

$$-72a^4b^5c^8 / -9a^2b^2c^3$$

By using the formula $a^n / a^m = a^{n-m}$

$$-72/-9 a^{4-2} b^{5-2} c^{8-3}$$

$$8a^2b^3c^5$$

Simplify:

7. $16m^3y^2 / 4m^2y$

Solution:

We have,

$$16m^3y^2 / 4m^2y$$

By using the formula $a^n / a^m = a^{n-m}$

$$16/4 m^{3-2} y^{2-1}$$

$$4my$$

8. $32m^2n^3p^2 / 4mnp$

Solution:

We have,

$$32m^2n^3p^2 / 4mnp$$

By using the formula $a^n / a^m = a^{n-m}$

$$32/4 m^{2-1} n^{3-1} p^{2-1}$$

$$8m^2np$$