

Algebraic Expressions

1. Factorise the numerator and simplify :

i) $\frac{a^2 + 4a + 4}{a + 2}$

ii) $\frac{m^2 - 49}{m + 7}$

2. Find the binomial which is a common factor of

$a^2 - 4b^2$ and $a^2 - 4ab + b^2$

3. Factorise completely :

i) $x^2y + 3x + xy + 3$

ii) $4x^2 + 4xy + y^2 - z^2$

iii) $a^2(x+5) - (x+5)$

iv) $a^5 - a$

v) $\frac{1}{2}m^2 - 8$

vi) $a^2 - 2ab + b^2 - c^2$

4. Divide :

i) $x^3 + 1$ by $x+1$

ii) $x^3 + 3x^2 - 4$ by $x-1$

iii) $4x^3 - 7x + 3$ by $x-1$