# POLYNOMIALS AND FACTORIZATION

## MATCH THE FOLLOWING ALGEBRAIC IDENTITIES

Some Algebraic Identities are:

(i) $(x+y+z)^2 \equiv x^2+y^2+z^2+2xy+2yz+2zx$

(ii) $(x+y)^3 \equiv x^3+y^3+3xy(x+y)$

(iii) $(x-y)^3 \equiv x^3-y^3-3xy(x-y)$

(iv) $x^3+y^3+z^3-3xyz \equiv (x+y+z)(x^2+y^2+z^2-xy-yz-zx)$ also

(v) $x^3+y^3 \equiv (x+y)(x^2-xy+y^2)$

(vi) $x^3-y^3 \equiv (x-y)(x^2+xy+y^2)$

**Identity I :** $(x+y)^2 \equiv x^2+2xy+y^2$

**Identity II :** $(x-y)^2 \equiv x^2-2xy+y^2$

**Identity III :** $(x+y)(x-y) \equiv x^2-y^2$

**Identity IV :** $(x+a)(x+b) \equiv x^2+(a+b)x+ab.$

## MATCH THE DEGREE OF POLYNOMIAL

| Degree | Name | Example |
|---|---|---|
| 0 | Constant | 7 |
| 1 | Linear | 4x+3 |
| 2 | Quadratic | $x^2-3x+2$ |
| 3 | Cubic | $2x^3-5x^2$ |
| 4 | Quartic | $x^4+3x-2$ |

Jumble the right hand side. Create a matching activity for students to match.
1 for the identities, 2nd oen for matching degree of polynomial. RESET, should jumble the order of the choices on right hand side. For degree of polynomial use a different set of coefficients – not the same ones listed above.