

Multiplying Polynomials

MADS-PM

$$\text{Ex) } 3x^1(x^2+2)$$
$$3x^3 + 6x$$

• When multiplying like bases, add exponents

$$\text{Ex) } 4x^2(x^2 + 2xy + 3y^2)$$
$$4x^4 + 8x^3y + 12x^2y^2$$

$$\text{Ex) } (3x+1)(4x^2-3x)$$
$$12x^3 - 9x^2 + 4x^2 - 3x$$
$$12x^3 - 5x^2 - 3x$$

$$\text{Ex) } (2x-1)^3$$
$$(2x-1)(2x-1)(2x-1)$$
$$4x^2 - 2x - 2x + 1 \quad \downarrow$$
$$(4x^2 - 4x + 1)(2x-1)$$
$$8x^3 - 4x^2 - 8x^2 + 4x + 2x - 1$$
$$8x^3 - 12x^2 + 6x - 1$$