

## Bell Work

$$(x^2 + 3x - 4) \div (x - 1)$$

For some polynomials, you can **factor by grouping** pairs of terms that have a common monomial factor. The pattern for factoring by grouping is shown below.

$$\begin{aligned}ra + rb + sa + sb &= r(a + b) + s(a + b) \\ &= (r + s)(a + b)\end{aligned}$$

## Factor Completely

$$z^3 + 5z^2 - 4z - 20$$

## Factor Completely

$$x^3 - 2x^2 - 9x + 18$$

## Factor Completely

$$3y^3 + y^2 + 9y + 3$$

## Factor Completely

$$16x^4 - 81$$

## Factor Completely

$$-16n^4 + 625$$

## Factor Completely

$$3p^8 + 15p^5 + 18p^2$$



## Factor Completely

$$5w^6 - 25w^4 + 30w^2$$

## Factor Completely

$$2p^{13} + 10p^9 + 8p^5$$