

1.3 GCF & Grouping

factoring: reverse distributive property

$ab + ac = a(b + c)$, a is
the common factor of ab and ac

Greatest common monomial factor:

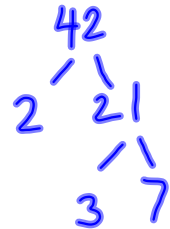
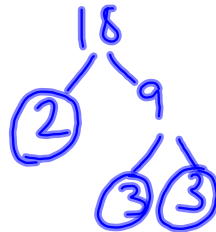
largest monomial that can be divided
by 2 or more terms.

Ex: $18 + 42$

$$18 = 2 \cdot 3 \cdot 3$$

$$42 = 2 \cdot 3 \cdot 7$$

$$2 \cdot 3 = \textcircled{6}$$



Ex: $6x^5, 30x^4, 12x^3$
 $6x^3$

Ex: $9x^4y^3, 15x^2y^4, 6x^3y^1$

$$3x^2y$$

$$\frac{x^3}{x^2} = x$$

$$24x^3 - 32x^2$$
$$8x^2(3x - 4)$$

$$-8xy - 6xy^2 + 4y$$
$$2y(-4x - 3xy + 2)$$

Grouping: look for terms that have common factors + factor them

$$\underbrace{2x^3 + 8x^2} + \underbrace{3x + 12}$$

$$\begin{aligned} & 2x^2(x+4) + 3(x+4) \\ & (2x^2+3)(x+4) \end{aligned}$$

$$x^3 - 5x^2 + x - 5$$

$$\underbrace{x^3 + x} - \underbrace{5x^2 - 5}$$

$$x(x^2+1) - 5(x^2+1)$$

$$(x-5)(x^2+1)$$

HW p 35

2-5/6 even
odds EC