

L7 Greatest common factor

A Factor is an integer that divides evenly into another number.

The factors of 6 are... _____

The factors of 24 are... _____

The Greatest Common Factor (GCF) of a polynomial: is the largest factor that divides evenly into each term.

- Factoring is the exact opposite of expanding.
- We expand a product and factor a sum.
- To factor by removing the Greatest Common Factor:
 1. Find the GCF→ the gcf of the coefficients , and the gcf of the variables (for each variable it will be the one with the smallest exponent)
 2. Find the second factor: divide each term in the polynomial by the GCF you found.
 3. Always check by expanding.

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Ex 1: Find the gcf

- a) 8 , 16 , 40 _____
- b) $6x^2$, $24x^3$, $12x^4$ _____
- c) $28x^2y^2$, $14x^3y^2$, $21x^2y^3$ _____
- d) $15a^6b^7$, $3a^3b^5$, $21a^6b^4$ _____

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Ex 2: Factor by removing the gcf

- a) $5x + 10y - 15$ b) $12x^2 - 8x$

Ex 3: Factor by pulling out the GCF

- $4x+6=$ _____
- $9x-15=$ _____
- $6x^2+10x=$ _____
- $49x^3y^2 - 21x^2y^2 + 14x^3y^3=$ _____
- $2a^2b^2-6ab^3+4ab^2=$ _____
- $x(x+3) + 2(x+3)=$ _____

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Practice:
2.8 # 1-5



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