

4.5 Factoring Complex Trinomials

$x^2 - x - 20$ _____ trinomial because _____.
 $3x^2 - 5x - 2$ _____ trinomial because _____.

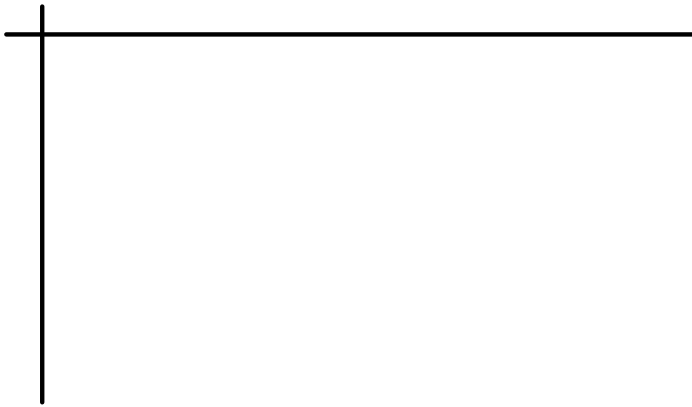
**** **Always** _____ first! ****

Ex. 1 Factor.

a) $3x^2 + 3x - 6$

b) $2r^2 + 2r - 24$

Factor $2x^2 + 5x + 3$ using **algebra tiles**.



Factoring by Decomposition

Expand $(2x-1)(3x+5)$

Given _____ you need a way of breaking up the middle term into _____ and _____.

Start by considering the numbers _____ and _____.

Their:

- sum is _____
- product is _____

How do these relate to the numbers in _____ ?

- _____ is the _____
- _____ is the _____ and _____ (____ & ____)

Once you have found the 2 numbers you can factor:

- use the numbers to break up the _____
- factor by _____

$6x^2 + 7x - 5$

M
A
N

Ex. 2 Factor by decomposition

a) $12x^2 + 11x - 5$

b) $8x^2 - 2x - 3$

c) $10x^2 - 17x + 3$

d) $12 + 18d + 8d^2$