

LEARNING GOALS

- Discover the relationship between the coefficients and constants in a trinomial and the coefficients and constants in its factors.
- Factor quadratic expressions of the form ax² + bx + c, where a = 1.



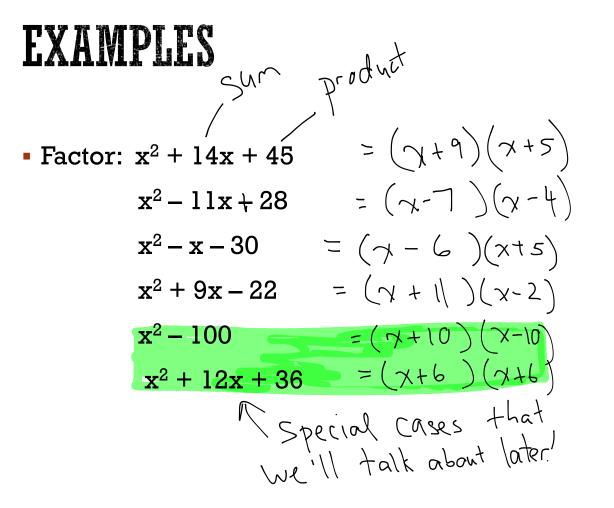
KEEP YOUR MINDS ON ...

- Remember expanding?
 - (x + 10)(x + 3)• $x^{2} + 3x + 10x + 30$ • $x^{2} + 13x + 30$ FACTORING Is undang Expanding



ITS MAGICAL!

Magic Number #1	Magic Number #2	Sum	Product
3	4	7	12
-2	3	l	- 6
6	-8	~2	- 48
-4	-2	- 6	8
Ц	5	9	20
- 2	5	3	-10
- 3	Ϊ	-2	-3
- 7	-3	-10	21
$\overline{\frown}$	\checkmark	15	54
5	5	10	25
4	- 4	0	- 16





BIG IDEAS

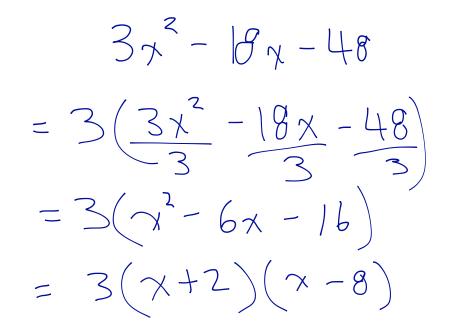
If a quadratic expression of the form x² + bx + c can be factored,

it can be factored into two binomials, (x + r) and (x + s), where
 r + s = b and r x s = c, r and s are integers.



BIG IDEAS (CONTINUED)

- Sometimes you will need to common factor the trinomial first.
- For example, factor $3x^2 18x 48$.





What if I get stuck. 97) $\chi^{2} - 5\chi - 24$ Use a $= (\chi - 8)(\chi + 3)$ Factors Sum Prod $-2, 12 10^{2}$ $\chi^{2} - 8, -24$ $-2, 12 10^{2}$ 3, -8 -54 - 24Check $\left(\chi - 8 \right) \chi + 3$ $= \chi^{2} + 3\chi - 8\chi - 24$ = $\chi^{2} - 5\chi - 24$

CONSOLIDATION

$x^2 + bx + c$



REINFORCEMENT

Pages 211 – 213
#4 – 9, 12, 16, 19*, 20*

Λ

HH, 6-9, 12, 16

