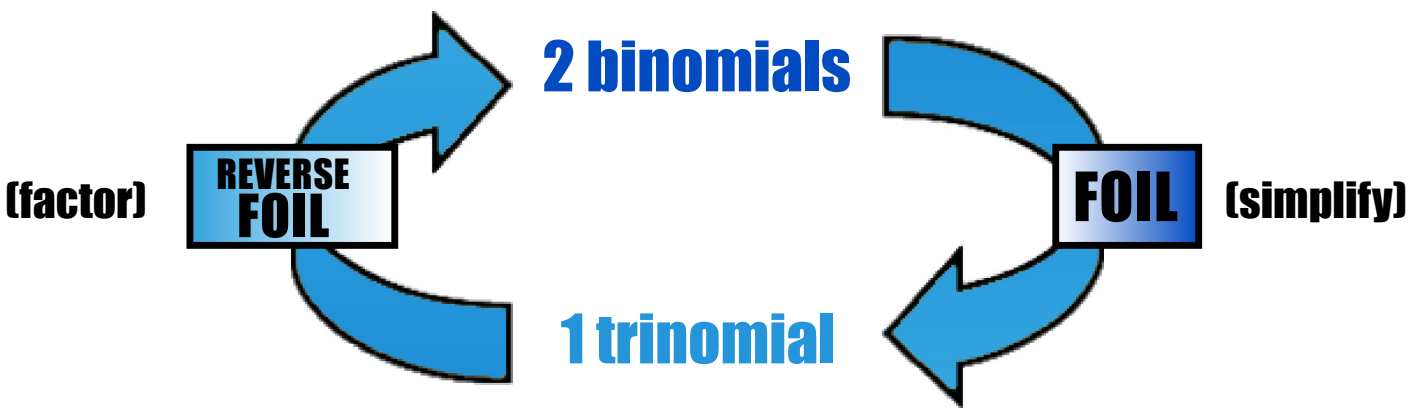
PRINCIPLES - LESSON 13A
REVERSE FOIL REVISITED

Recall: The FOIL Method for multiplying two binomials

ex1) $(n+4)(n+3)$

F O I L

$= n^2 + 3n + 4n + 12 = n^2 + 7n + 12$



REVERSE FOIL

Factor.

F OI L

ex2) $x^2 + 10x + 9$

9

3·3

1·9

= $(x+9)(x+1)$

REVERSE FOIL

1. Force FIRST
2. Force SIGNS
3. Force LAST
4. Check OI

REVERSE FOIL

Factor.

F OI L

ex3) $z^2 - 20z + 51$

51

$3 \cdot 17$

$1 \cdot 51$

$= (z - 17)(z - 3)$

REVERSE FOIL

1. Force FIRST
2. Force SIGNS
3. Force LAST
4. Check OI

REVERSE FOIL

Factor.

F OI L

ex4) $n^2 + 5n - 6$

6
2 · 3
1 · 6

$= (n+6)(n-1)$

REVERSE FOIL

1. Force FIRST
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4. Check OI

REVERSE FOIL

Factor.

F OI L

ex5) $j^2 + 5jk - 14k^2$

14

$2 \cdot 7$

$1 \cdot 14$

$= (j + 7k)(j - 2k)$

REVERSE FOIL

1. Force FIRST
2. Force SIGNS
3. Force LAST
4. Check OI

REVERSE FOIL

Factor.

F OI L

ex6) $3a^2 - 22a - 16$

3
$1 \cdot 3$

16
$4 \cdot 4$
$2 \cdot 8$
$1 \cdot 16$

$= (3a + 2)(a - 8)$

REVERSE FOIL

1. Force FIRST
2. Force SIGNS
3. Force LAST
4. Check OI

REVERSE FOIL

Factor.

F OI L

ex7) $22x^2 + 47x + 6$

22: $2 \cdot 11$, $1 \cdot 22$

6: $2 \cdot 3$, $1 \cdot 6$

$= (22x + 3)(x + 2)$

REVERSE FOIL

1. Force FIRST
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3. Force LAST
4. Check OI

REVERSE FOIL

Factor.

ex8) $24y^2 + 89y + 30$

F O I L

$= (8y + 3)(3y + 10)$

TIME SAVER

If there is no GCF in the original trinomial, then there CANNOT be a GCF in either of the two binomial factors.

24	30
$4 \cdot 6$	$5 \cdot 6$
$3 \cdot 8$	$3 \cdot 10$
$2 \cdot 12$	$2 \cdot 15$
$1 \cdot 24$	$1 \cdot 30$