

Algebra I

5-8

Backwards FOIL

Math Instructions

Solve - Get the variable on a side by itself.

Simplify - Put together Like Terms

Factor - Break apart into multiplied groups

Evaluate - find a numeric answer

Rules of Signs

- 1) $ax^2 + bx + c \rightarrow (+)(+)$] IF 2nd sign is + then two of the 1st.
- 2) $ax^2 - bx + c \rightarrow (-)(-)$]
- 3) $ax^2 + bx - c \rightarrow (+)(-)$] IF 2nd sign is -, then one of each.
- 4) $ax^2 - bx - c \rightarrow (-)(-)$]

Factor.

1) $y^2 + 5y - 6$ UV 3, 2

$$(y+6)(y-1)$$

$\begin{matrix} -1y \\ +6y \\ +5y \end{matrix}$

3 2

Set equal to zero and solve.

1) $y^2 + 5y - 6 = 0$

$$y = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

$$y = \frac{-5 \pm \sqrt{5^2 - 4(1)(-6)}}{2(1)} = \frac{-5 \pm \sqrt{25+24}}{2}$$

$$= \frac{-5 \pm \sqrt{49}}{2} = \frac{-5 \pm 7}{2} = \frac{2}{2} \text{ or } \frac{-12}{2}$$

{1, -6}

23) $p^2 - 16pq - 36q^2$

$$(p+2q)(p-18q)$$

$\begin{matrix} 3q \\ -18q \\ -16q \end{matrix}$

29) $1 + 11pq - 80p^2q^2$

$$(1+16pq)(1-5pq)$$

33) $-380 + x + x^2$

$$x^2 + x - 380$$

$$(x+20)(x-19)$$

$$\begin{matrix} 38 & 10 \\ 19 & 20 \end{matrix}$$

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2-34 even

In addition to the above,
set $\frac{10, 12}{14}$ equal to zero
and solve.