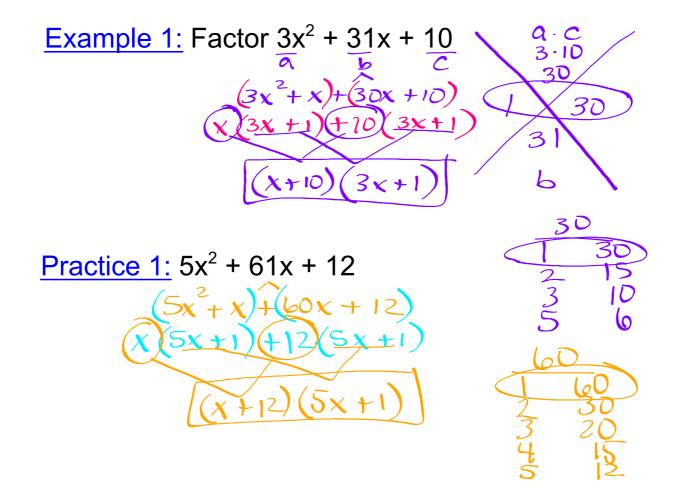
6.4 Factoring Trinomials of the Form ax² + bx + c by Grouping

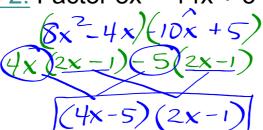
OBJECTIVE 1: Using the Grouping Method This method will be used if you have four terms, or if you have a \neq 1.

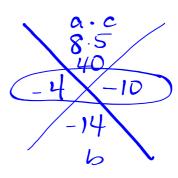
To Factor Trinomials by Grouping

- Step 1. Factor out the greatest common factor if there is one other than 1.
- Step 2. For the resulting trinomial $ax^2 + bx + c$, find two numbers whose product is $a \cdot c$ and whose sum is b.
- Step 3. Write the middle term, bx, using the factors found in Step 2.
- Step 4. Factor by grouping.

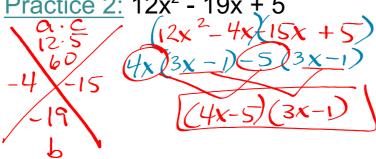


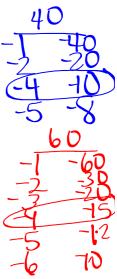
Example 2: Factor
$$8x^2 - 14x + 5$$





Practice 2: $12x^2 - 19x + 5$





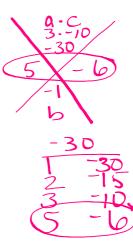
Example 3: Factor $6x^2 - 2x - 20$

$$2(3x^{2}-x-10)$$

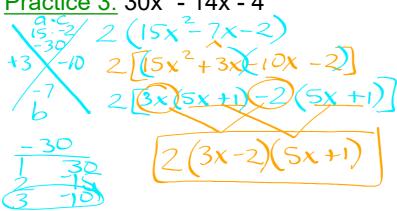
$$2[3x^{2}-6x]+(5x-10)$$

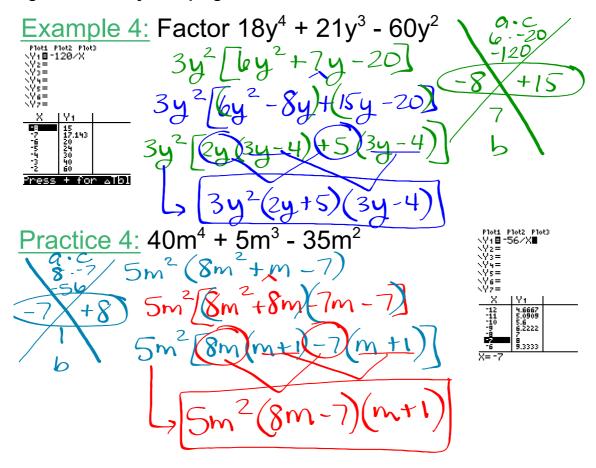
$$2[3x(x-2)+5(x-2)]$$

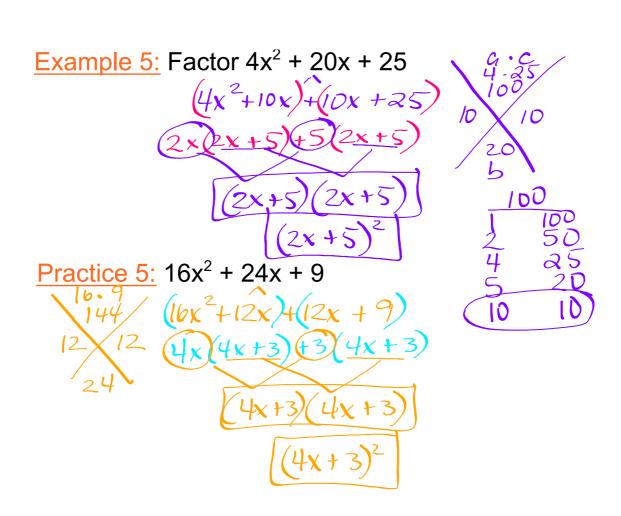
$$2(3x+5)(x-2)$$

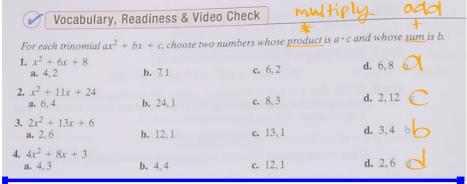


Practice 3: $30x^2 - 14x - 4$









6.4 HW Assignment:

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