

Date: _____

3.5 Decomposition Factoring**Recall:**

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

$$=$$
$$=$$
Decomposition FactoringFactor. $3x^2 + 8x + 4$

Step 1: Check for a GCF

Step 2: Find two integers with

- A product of $3 \times 4 = 12$
- A sum of 8

Step 3: Split (decompose) the middle term into two parts using the integers from step 1

Step 4: Factor by grouping

Check?

Ex. Factor each trinomial, if possible:

a) $2x^2 + 7x - 4$

c) $24x^2 - 30x - 9$

b) $3x^2 + 2x + 4$

d) $6x^2 - 5xy + y^2$

e) $-3a^3b - 51a^2b - 30ab$

f) $2y^2 + 7xy + 3x^2$

Ex. Identify all values of q that allows each trinomial to be factored:

a) $2x^2 + qx + 5$

b) $3x^2 + qxy - 4y^2$

Practice: pg. 234/ # 6 – 8, 9ad, 11ac, 13, 15, 17, 18