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3. If the coefficient of the third term is negative, factor

4. Use the reverse of the distributive property to factor

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5. Now factor the GCF from the result of step 4.

Factor the following polynomials completely.

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1. 7am + 35bm + 9ad + 45bd

2. 42wa+54wt+56da+72dt 3. 36yw - 24nb + 12bw - 72yn

4. 72he+16we+27hn+6wn

6. 12bc + 15be - 8cd - 10de

7. 10ep - 25eq + 2fp - 5fq

8. 8mp - 12mq - 6np + 9nq

Steps in Factoring by Grouping:

each group of two terms.

5. 26wy - 91by + 35bd - 10wd

9. $12ax^2 + 15ay + 16b^2x^2 + 20b^2y$ 10. $15a^3c^2 - 12a^3a^3 - 10b^2c^2 + 8b^2a^3$

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Practice Exercises 1.2.2

1. 4wt + 2wh + 6it + 3ih

3. hv + av + he + ae

6. $12a^3 - 9a^2 + 4a - 3$

7. $2p^3 + 5p^2 + 6p + 15$ 8. $3n^3 - 4n^2 + 9n - 12$

9. $12n^3 + 4n^2 + 3n + 1$

10. $m^3 - m^2 + 2m - 2$

Activity 1.2.2

2. 15te-12he+10ty-8hy

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Lesson 1.2.2: Factoring by Grouping

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