6.5: Factoring by Grouping

SWBAT factor polynomials with four terms by grouping.

Assignments:

HW47

Factoring by Grouping

- This method is used to factor ***polynomials with 4 terms***

1. Find the GCF and factor.
2. Split the polynomial into 2 binomials
3. Factor each binomial by finding the common factor.
4. Put the factored pieces back together
5. Factor by finding the common factor.

1. $2r^3 + 6r^2 + r + 3$

2. $72x^3 - 12x^2 - 168x + 28$

Factor each completely.

1. $35p^3 - 30p^2 - 21p + 18$
2. $x^3 + 3x^2 + 3x + 9$
3. $24a^3 + 12a^2 - 8a - 4$
4. $112x^4 + 84x^3 + 140x^2 + 105x$
5. $7n^3 - 4n^2 + 35n - 20$
6. $15m^3 - 75m^2 + 5m - 25$
7. $120a^3 - 105a^2 - 200a + 175$
8. $75x^5 - 120x^4 + 200x^3 - 320x^2$