Factoring Practice

**Factor each polynomial.**

|  |  |  |
| --- | --- | --- |
| **Grouping** | **Difference of Squares** | **Sum/Difference of Cubes** |
| Example: | Example:  roots: | Example:  roots:  **Remember:** *same sign, change sign, PLUS* |
| 1. | 2. | 3. |
| 4. | 5. | 6. |
| 7. | 8. | 9. |
| 10. | 11. | 12. |

**Puzzle question 1: What is ?**

**Puzzle question 2: What is ?**

**Puzzle question 3: What set of two numbers will multiply to ,** *and* **add to ?**

|  |  |  |
| --- | --- | --- |
| **EXAMPLE:**  1.  2.  3.  Write those numbers in the spaces: | **EXAMPLE:**  1.  2.  3.  Write those numbers in the spaces: | 13.  1.  2.  3.  Write those numbers in the spaces: |
| 14.  1.  2.  3.  Write those numbers in the spaces: | 15.  1.  2.  3.  Write those numbers in the spaces: | 16.  1.  2.  3.  Write those numbers in the spaces: |

**Solve for *x*.**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **EXAMPLE**   |  |  | | --- | --- | |  | or | |  |  |   So | 17.   |  |  | | --- | --- | |  | or | |  |  |   So | 18.   |  |  | | --- | --- | |  | or | |  |  |   So |