

Math Sheet

Name _____ Score _____ / 12 Teacher _____ Date _____

Factoring Cubes

Factor each sum or difference of cubes completely.

1. $x^3 - 512y^3$

2. $x^3 + 8$

3. $x^3 + 343y^3$

4. $x^3 - 64y^3$

5. $x^3y + 27y$

6. $x^3 + 1$

7. $x^3y - 729y$

8. $x^4 - x$

9. $x^4 + 64x$

10. $x^4 + 27x$

11. $x^3 - 1$

12. $x^3y - 125y$

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Factoring Cubes

Answer key

Factor each sum or difference of cubes completely.

1. $x^3 - 512y^3$
 $(x - 8y)(x^2 + 8xy + 64y^2)$

2. $x^3 + 8$
 $(x + 2)(x^2 - 2x + 4)$

3. $x^3 + 343y^3$
 $(x + 7y)(x^2 - 7xy + 49y^2)$

4. $x^3 - 64y^3$
 $(x - 4y)(x^2 + 4xy + 16y^2)$

5. $x^3y + 27y$
 $y(x + 3)(x^2 - 3x + 9)$

6. $x^3 + 1$
 $(x + 1)(x^2 - x + 1)$

7. $x^3y - 729y$
 $y(x - 9)(x^2 + 9x + 81)$

8. $x^4 - x$
 $x(x - 1)(x^2 + x + 1)$

9. $x^4 + 64x$
 $x(x + 4)(x^2 - 4x + 16)$

10. $x^4 + 27x$
 $x(x + 3)(x^2 - 3x + 9)$

11. $x^3 - 1$
 $(x - 1)(x^2 + x + 1)$

12. $x^3y - 125y$
 $y(x - 5)(x^2 + 5x + 25)$