

Algebra 2 Sum / Difference of Cubes

Name \_\_\_\_\_ ID: 1

Assignment

Date \_\_\_\_\_ Period \_\_\_\_\_

Factor each completely.

1)  $u^3 - 1$

2)  $-27m^4 - 125m$

3)  $64x^3 + 27$

4)  $27x^3 + 8y^3$

5)  $1372a^4 - 500ab^3$

Station 1

Algebra 2 Sum/Difference of Cubes

Name \_\_\_\_\_ ID: 1

## Assignment

Date \_\_\_\_\_ Period \_\_\_\_\_

Factor each completely.

1)  $u^3 - 1$

$$(u-1)(u^2+u+1)$$

2)  $-27m^4 - 125m$

$$m(-3m-5)(9m^2-15m+25)$$

3)  $64x^3 + 27$

$$(4x+3)(16x^2-12x+9)$$

4)  $27x^3 + 8y^3$

$$(3x+2y)(9x^2-6xy+4y^2)$$

5)  $1372a^4 - 500ab^3$

$$4a(7a-5b)(49a^2+35ab+25b^2)$$

Station 1

Unit 2 Test Review

Factoring trinomials when  $a > 1$

Factor each completely.

1)  $2x^2 + 7x - 30$

2)  $3x^2 + 10x + 7$

3)  $3x^2 + x - 2$

4)  $40m^2 - 30m - 45$

5)  $42n^2 + 288n - 42$

Station 2

Unit 2 Test Review

Factoring trinomials when  $a > 1$

Factor each completely.

1)  $2x^2 + 7x - 30$

$$(2x - 5)(x + 6)$$

2)  $3x^2 + 10x + 7$

$$(3x + 7)(x + 1)$$

3)  $3x^2 + x - 2$

$$(3x - 2)(x + 1)$$

4)  $40m^2 - 30m - 45$

$$5(2m - 3)(4m + 3)$$

5)  $42n^2 + 288n - 42$

$$6(7n - 1)(n + 7)$$

Station 2

Unit 2 Test Review

Factoring Trinomials when  $a=1$

Factor each completely.

1)  $2x^2 + 8x - 24$

2)  $k^2 - k - 30$

3)  $6m^3 - 18m^2 + 12m$

4)  $p^2 + 11p + 18$

5)  $4x^2 - 20x + 16$

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Station 3

Unit 2 Test Review

Factoring Trinomials when  $a=1$

Factor each completely.

1)  $2x^2 + 8x - 24$

$$2(x-2)(x+6)$$

2)  $k^2 - k - 30$

$$(k-6)(k+5)$$

3)  $6m^3 - 18m^2 + 12m$

$$6m(m-2)(m-1)$$

4)  $p^2 + 11p + 18$

$$(p+9)(p+2)$$

5)  $4x^2 - 20x + 16$

$$4(x-1)(x-4)$$

Station 3

Unit 2 Test Review

Difference of Squares

Factor each completely.

1)  $25n^2 - 1$

2)  $32n^2 - 98$

3)  $81n^2 - 64$

4)  $8x^2 - 288$

5)  $324x^2 - 256y^2$

Station 4

Unit 2 Test Review

Difference of Squares

Factor each completely.

1)  $25n^2 - 1$

$$(5n+1)(5n-1)$$

2)  $32n^2 - 98$

$$2(4n+7)(4n-7)$$

3)  $81n^2 - 64$

$$(9n+8)(9n-8)$$

4)  $8x^2 - 288$

$$8(x+6)(x-6)$$

5)  $324x^2 - 256y^2$

$$4(9x+8y)(9x-8y)$$

Station 4



Unit 2 Test Review Factoring

Factor by Grouping

Factor each completely.

1)  $2p^3 - 10p^2 + 3p - 15$

2)  $16uv - 64u - 56v + 224$

3)  $32uv - 8u + 20v - 5$

4)  $48uv + 42ur^2 + 8rv + 7r^3$

5)  $15xy - 75xv - 40vy + 200v^2$

Station 5

Unit 2 Test Review Factoring

Factor by Grouping

Factor each completely.

1)  $2p^3 - 10p^2 + 3p - 15$

$$(2p^2 + 3)(p - 5)$$

2)  $16uv - 64u - 56v + 224$

$$8(2u - 7)(v - 4)$$

$$(v - 4)(16u - 56)$$

3)  $32uv - 8u + 20v - 5$

$$(8u + 5)(4v - 1)$$

4)  $48uv + 42ur^2 + 8rv + 7r^3$

$$(6u + r)(8v + 7r^2)$$

5)  $15xy - 75xv - 40vy + 200v^2$

$$5(3x - 8v)(y - 5v)$$

Station 5

# Greatest Common Factor

$$\textcircled{1} \quad 8x^3y^3 + 4x^3$$

$$\textcircled{2} \quad 27y^7 + 12y^2x + 9y^2$$

$$\textcircled{3} \quad 20x^8y^2z^2 + 15x^5y^2z + 35x^3y^3z$$

$$\textcircled{4} \quad 7ab - 35a^2b$$

$$\textcircled{5} \quad 27x^2y^5 - 72x^3y^2$$

Station 6

# Greatest Common Factor

$$\textcircled{1} \quad 8x^3y^3 + 4x^3$$

$$\boxed{4x^3(2y^3+1)}$$

$$\textcircled{2} \quad 27y^7 + 12y^2x + 9y^2$$

$$\boxed{3y^2(9y^5+4x+3)}$$

$$\textcircled{3} \quad 20x^8y^2z^2 + 15x^5y^2z + 35x^3y^3z$$

$$\boxed{5x^3y^2z(4x^5z+3x^2+7y)}$$

$$\textcircled{4} \quad 7ab - 35a^2b$$

$$\boxed{7ab(1-5a)}$$

$$\textcircled{5} \quad 27x^2y^5 - 72x^3y^2$$

$$\boxed{9x^2y^2(3y^3-8x)}$$

Station 6