

## Factoring Quadratics

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

**Factor each completely.**

1)  $k^2 + 13k + 40$

2)  $k^3 + 15k^2 + 50k$

3)  $2m^3 - 6m^2$

4)  $6p^2 + 18p - 60$

5)  $m^2 - 7m - 30$

6)  $2v^2 + 22v + 20$

7)  $10b^3 - 66b^2 - 112b$

8)  $5n^2 + 3n$

9)  $28x^2 - 32x + 4$

10)  $3n^3 - 37n^2 + 90n$

11)  $3a^2 - 20a - 100$

12)  $5a^3 + 24a^2 - 5a$

$$13) 4x^4 - 23x^3 + 28x^2$$

$$14) 54v^3 + 324v^2 + 480v$$

$$15) 30x^2 + 99x + 81$$

$$16) 9x^2 + x - 8$$

$$17) 6a^3 + 55a^2 + 56a$$

$$18) 6r^2 - 7r - 90$$

$$19) m^2 - 4mn + 3n^2$$

$$20) x^2 + 14xy + 49y^2$$

$$21) a^2b - 19ab^2 + 90b^3$$

$$22) 2x^2 + 12xy$$

$$23) 5x^2 + 45xy$$

$$24) u^3 + 8u^2v + 16uv^2$$

## Factoring Quadratics

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

**Factor each completely.**

1)  $k^2 + 13k + 40$

$(k + 8)(k + 5)$

2)  $k^3 + 15k^2 + 50k$

$k(k + 10)(k + 5)$

3)  $2m^3 - 6m^2$

$2m^2(m - 3)$

4)  $6p^2 + 18p - 60$

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

5)  $m^2 - 7m - 30$

$(m + 3)(m - 10)$

6)  $2v^2 + 22v + 20$

$2(v + 1)(v + 10)$

7)  $10b^3 - 66b^2 - 112b$

$2b(5b + 7)(b - 8)$

8)  $5n^2 + 3n$

$n(5n + 3)$

9)  $28x^2 - 32x + 4$

$4(7x - 1)(x - 1)$

10)  $3n^3 - 37n^2 + 90n$

$n(3n - 10)(n - 9)$

11)  $3a^2 - 20a - 100$

$(3a + 10)(a - 10)$

12)  $5a^3 + 24a^2 - 5a$

$a(5a - 1)(a + 5)$

$$13) 4x^4 - 23x^3 + 28x^2$$

$$x^2(x-4)(4x-7)$$

$$14) 54v^3 + 324v^2 + 480v$$

$$6v(3v+10)(3v+8)$$

$$15) 30x^2 + 99x + 81$$

$$3(2x+3)(5x+9)$$

$$16) 9x^2 + x - 8$$

$$(x+1)(9x-8)$$

$$17) 6a^3 + 55a^2 + 56a$$

$$a(a+8)(6a+7)$$

$$18) 6r^2 - 7r - 90$$

$$(3r+10)(2r-9)$$

$$19) m^2 - 4mn + 3n^2$$

$$(m-3n)(m-n)$$

$$20) x^2 + 14xy + 49y^2$$

$$(x+7y)^2$$

$$21) a^2b - 19ab^2 + 90b^3$$

$$b(a-10b)(a-9b)$$

$$22) 2x^2 + 12xy$$

$$2x(x+6y)$$

$$23) 5x^2 + 45xy$$

$$5x(x+9y)$$

$$24) u^3 + 8u^2v + 16uv^2$$

$$u(u+4v)^2$$