

Factoring Trinomials ($a > 1$)

DAY 8

Date _____ Period _____

Factor each completely.

1) $3p^2 - 2p - 5$

$(3p - 5)(p + 1)$

2) $2n^2 + 3n - 9$

$(2n - 3)(n + 3)$

3) $3n^2 - 8n + 4$

$(3n - 2)(n - 2)$

4) $5n^2 + 19n + 12$

$(5n + 4)(n + 3)$

5) $2v^2 + 11v + 5$

$(2v + 1)(v + 5)$

6) $2n^2 + 5n + 2$

$(2n + 1)(n + 2)$

7) $7a^2 + 53a + 28$

$(7a + 4)(a + 7)$

8) $9k^2 + 66k + 21$

$3(3k + 1)(k + 7)$

9) $15n^2 - 27n - 6$

$3(5n + 1)(n - 2)$

10) $5x^2 - 18x + 9$

$(5x - 3)(x - 3)$

11) $4n^2 - 15n - 25$

$(n - 5)(4n + 5)$

12) $4x^2 - 35x + 49$

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

13) $4n^2 - 17n + 4$

$(n - 4)(4n - 1)$

14) $6x^2 + 7x - 49$

$(3x - 7)(2x + 7)$

15) $6x^2 + 37x + 6$

$(x + 6)(6x + 1)$

16) $-6a^2 - 25a - 25$

$-(2a + 5)(3a + 5)$

17) $6n^2 + 5n - 6$

$(2n + 3)(3n - 2)$

18) $16b^2 + 60b - 100$

$4(b + 5)(4b - 5)$

Factoring Quadratic Expressions

DAY 8

Date _____ Period _____

Factor each completely.

1) $x^2 - 7x - 18$

$(x - 9)(x + 2)$

2) $p^2 - 5p - 14$

$(p + 2)(p - 7)$

3) $m^2 - 9m + 8$

$(m - 1)(m - 8)$

4) $x^2 - 16x + 63$

$(x - 9)(x - 7)$

5) $7x^2 - 31x - 20$

$(7x + 4)(x - 5)$

6) $7k^2 + 9k$

$k(7k + 9)$

7) $7x^2 - 45x - 28$

$(7x + 4)(x - 7)$

8) $2b^2 + 17b + 21$

$(2b + 3)(b + 7)$

9) $5p^2 - p - 18$

$(5p + 9)(p - 2)$

10) $28n^4 + 16n^3 - 80n^2$

$4n^2(7n - 10)(n + 2)$

11) $3b^3 - 5b^2 + 2b$

$b(3b - 2)(b - 1)$

12) $7x^2 - 32x - 60$

$(7x + 10)(x - 6)$

13) $30n^2b - 87nb + 30b$

$3b(2n - 5)(5n - 2)$

14) $9r^2 - 5r - 10$

Not factorable

15) $9p^2r + 73pr + 70r$

$r(p + 7)(9p + 10)$

16) $9x^2 + 7x - 56$

Not factorable

17) $4x^3 + 43x^2 + 30x$

$x(x + 10)(4x + 3)$

18) $10m^2 + 89m - 9$

$(m + 9)(10m - 1)$

Critical thinking questions:

19) For what values of b is the expression factorable?

$x^2 + bx + 12$

13, 8, 7, -13, -8, -7

20) Name four values of b which make the expression factorable:

$x^2 - 3x + b$

Many answers. Ex: 0, 2, -4, -10, -18