

Name _____ Date _____

Additional Exercises 7.3

Form I

Factoring Trinomials Whose Leading Coefficient is Not 1

Use the method of your choice to factor each trinomial, or state that the trinomial is prime.

1. $2x^2 + 9x + 4$ 1. _____

2. $3x^2 + 16x + 5$ 2. _____

3. $4a^2 + 11a + 6$ 3. _____

4. $3x^2 + 22x - 16$ 4. _____

5. $2y^2 - y - 15$ 5. _____

6. $3x^2 - 14x - 5$ 6. _____

7. $4a^2 - 13a + 10$ 7. _____

8. $6x^2 - 19x + 3$ 8. _____

9. $6y^2 - 13y + 6$ 9. _____

10. $8x^2 + 6x + 1$ 10. _____

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11. $10x^2 - 17x + 3$

11. _____

12. $12y^2 + 4y - 5$

12. _____

13. $16a^2 - 34a - 15$

13. _____

Factor completely.

14. $6x^2 + 26x + 8$

14. _____

15. $24x^2 - 66x + 15$

15. _____

16. $10a^4 + a^3 - 2a^2$

16. _____

17. $8y^3 + 28y^2 + 24y$

17. _____

18. $3x^4 - 4x^3 - 4x^2$

18. _____

19. $8a^3 - 18a^2 - 18a$

19. _____

20. $10x^2 + 45x + 50$

20. _____

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Form II

Factoring Trinomials Whose Leading Coefficient is Not 1

Use the method of your choice to factor each trinomial, or state that the trinomial is prime.

1. $6x^2 + 11x + 3$ 1. _____

2. $4x^2 + 11x + 6$ 2. _____

3. $10x^2 + 27x + 5$ 3. _____

4. $8x^2 - 14x + 5$ 4. _____

5. $12x^2 - 25x + 5$ 5. _____

6. $10x^2 + x - 24$ 6. _____

7. $8x^2 + 33x + 4$ 7. _____

8. $14x^2 + 17x - 6$ 8. _____

9. $6x^2 - 7x - 10$ 9. _____

10. $16x^2 - 8x - 15$ 10. _____

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11. $12x^2 + 52xy - 9y^2$

11. _____

12. $16x^2 + 34x - 15$

12. _____

13. $3x^2 - 5xy - 28y^2$

13. _____

Factor completely.

14. $8a^2 + 12a + 4$

14. _____

15. $18a^2 + 66a - 24$

15. _____

16. $20y^2 - 35y - 10$

16. _____

17. $12x^3 + 18x^2 + 24x$

17. _____

18. $12a^3 - 12a^2 - 45a$

18. _____

19. $32y^3 + 68y^2 - 30y$

19. _____

20. $48x^2 - 40x - 32$

20. _____

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Form III

Factoring Trinomials Whose Leading Coefficient is Not 1

Use the method of your choice to factor each polynomial, or state that the polynomial is prime.

1. $7x^2 + 18x + 11$ 1. _____

2. $2a^2 - a - 28$ 2. _____

3. $2x^2 + 7x + 1$ 3. _____

4. $15x^2 + 28x + 12$ 4. _____

5. $9x^2 + 14x - 8$ 5. _____

6. $10a^2 + 7a - 12$ 6. _____

7. $24y^2 + 29y - 4$ 7. _____

8. $15x^2 + xy - 2y^2$ 8. _____

9. $x^4 + 7x^3 + 6x^2$ 9. _____

10. $15b^2 + 14b - 8$ 10. _____

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11. $20x^2 + 21x - 27$

11. _____

12. $4x^2 - 14xy - 8y^2$

12. _____

13. $10a^2 - 11a + 18$

13. _____

14. $42x^2 + 35x - 42$

14. _____

15. $12a^2 + 19a + 4$

15. _____

16. $18y^2 - 78y - 60$

16. _____

17. $60x^2 + 35xy + 5y^2$

17. _____

18. $8x^2 - 30x + 25$

18. _____

19. $16x^3y^4 + 40x^2y^5 + 25xy^6$

19. _____

20. The area of a rectangle is $36x^2 + 66x + 30$. If the length is $6x + 6$, express the width as a binomial.

20. _____