

Factoring Quadratic Expressions (A)

Name: _____

Date: _____

Factor each expression.

1. $-72x^2 - 174x - 105$

11. $-98x^2 - 168x - 64$

2. $150x^2 + 415x + 280$

12. $144x^2 - 260x + 100$

3. $24x^2 - 124x + 160$

13. $-144x^2 + 316x - 112$

4. $84x^2 - 34x - 8$

14. $-96x^2 - 212x - 112$

5. $-64x^2 - 152x - 70$

15. $-42x^2 + 141x + 216$

6. $-135x^2 - 30x + 25$

16. $192x^2 + 8x - 4$

7. $-112x^2 - 124x - 24$

17. $-80x^2 - 160x - 75$

8. $-135x^2 - 183x - 60$

18. $-35x^2 - 295x - 120$

9. $-24x^2 + 8x + 10$

19. $-40x^2 + 106x - 36$

10. $60x^2 + 141x + 63$

20. $48x^2 + 100x + 50$

Factoring Quadratic Expressions (A) Answers

Name: _____

Date: _____

Factor each expression.

1. $-72x^2 - 174x - 105$

$-3(4x + 5)(6x + 7)$

2. $150x^2 + 415x + 280$

$5(5x + 8)(6x + 7)$

3. $24x^2 - 124x + 160$

$4(2x - 5)(3x - 8)$

4. $84x^2 - 34x - 8$

$2(6x + 1)(7x - 4)$

5. $-64x^2 - 152x - 70$

$-2(8x + 5)(4x + 7)$

6. $-135x^2 - 30x + 25$

$-5(3x - 1)(9x + 5)$

7. $-112x^2 - 124x - 24$

$-4(4x + 1)(7x + 6)$

8. $-135x^2 - 183x - 60$

$-3(5x + 4)(9x + 5)$

9. $-24x^2 + 8x + 10$

$-2(6x - 5)(2x + 1)$

10. $60x^2 + 141x + 63$

$3(4x + 7)(5x + 3)$

11. $-98x^2 - 168x - 64$

$-2(7x + 8)(7x + 4)$

12. $144x^2 - 260x + 100$

$4(4x - 5)(9x - 5)$

13. $-144x^2 + 316x - 112$

$-4(9x - 4)(4x - 7)$

14. $-96x^2 - 212x - 112$

$-4(3x + 4)(8x + 7)$

15. $-42x^2 + 141x + 216$

$-3(7x + 8)(2x - 9)$

16. $192x^2 + 8x - 4$

$4(6x + 1)(8x - 1)$

17. $-80x^2 - 160x - 75$

$-5(4x + 5)(4x + 3)$

18. $-35x^2 - 295x - 120$

$-5(x + 8)(7x + 3)$

19. $-40x^2 + 106x - 36$

$-2(4x - 9)(5x - 2)$

20. $48x^2 + 100x + 50$

$2(4x + 5)(6x + 5)$

Factoring Quadratic Expressions (B)

Name: _____

Date: _____

Factor each expression.

1. $-32x^2 + 28x + 4$

11. $-280x^2 + 45x + 405$

2. $98x^2 + 14x - 12$

12. $18x^2 - 105x + 108$

3. $-126x^2 - 75x - 9$

13. $-252x^2 + 92x + 224$

4. $144x^2 + 140x - 196$

14. $-64x^2 + 32x + 140$

5. $-24x^2 + 26x + 8$

15. $-288x^2 - 292x + 36$

6. $-32x^2 - 152x - 180$

16. $135x^2 - 60x + 5$

7. $-24x^2 - 220x - 224$

17. $-12x^2 - 2x + 2$

8. $160x^2 + 500x + 315$

18. $-288x^2 - 28x + 196$

9. $60x^2 - 100x + 35$

19. $162x^2 + 279x + 105$

10. $200x^2 - 215x + 35$

20. $252x^2 + 212x - 144$

Factoring Quadratic Expressions (B) Answers

Name: _____

Date: _____

Factor each expression.

1. $-32x^2 + 28x + 4$

$-4(x - 1)(8x + 1)$

2. $98x^2 + 14x - 12$

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

3. $-126x^2 - 75x - 9$

$-3(7x + 3)(6x + 1)$

4. $144x^2 + 140x - 196$

$4(9x - 7)(4x + 7)$

5. $-24x^2 + 26x + 8$

$-2(4x + 1)(3x - 4)$

6. $-32x^2 - 152x - 180$

$-4(2x + 5)(4x + 9)$

7. $-24x^2 - 220x - 224$

$-4(6x + 7)(x + 8)$

8. $160x^2 + 500x + 315$

$5(4x + 9)(8x + 7)$

9. $60x^2 - 100x + 35$

$5(2x - 1)(6x - 7)$

10. $200x^2 - 215x + 35$

$5(8x - 7)(5x - 1)$

11. $-280x^2 + 45x + 405$

$-5(8x + 9)(7x - 9)$

12. $18x^2 - 105x + 108$

$3(3x - 4)(2x - 9)$

13. $-252x^2 + 92x + 224$

$-4(7x - 8)(9x + 7)$

14. $-64x^2 + 32x + 140$

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

15. $-288x^2 - 292x + 36$

$-4(9x - 1)(8x + 9)$

16. $135x^2 - 60x + 5$

$5(3x - 1)(9x - 1)$

17. $-12x^2 - 2x + 2$

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

18. $-288x^2 - 28x + 196$

$-4(9x - 7)(8x + 7)$

19. $162x^2 + 279x + 105$

$3(6x + 7)(9x + 5)$

20. $252x^2 + 212x - 144$

$4(7x + 9)(9x - 4)$

Factoring Quadratic Expressions (C)

Name: _____

Date: _____

Factor each expression.

1. $60x^2 - 115x + 25$

11. $42x^2 + 8x - 24$

2. $-32x^2 + 284x + 36$

12. $-128x^2 - 64x - 6$

3. $-80x^2 - 204x - 112$

13. $72x^2 + 20x - 28$

4. $-162x^2 - 108x + 32$

14. $-50x^2 - 85x + 315$

5. $-108x^2 - 30x + 112$

15. $15x^2 - 69x + 36$

6. $-5x^2 + 70x - 225$

16. $54x^2 + 45x - 75$

7. $-320x^2 + 320x - 75$

17. $36x^2 + 144x + 140$

8. $-84x^2 + 2x + 60$

18. $64x^2 - 264x + 140$

9. $60x^2 - 112x + 48$

19. $12x^2 - 14x - 10$

10. $-135x^2 - 114x - 24$

20. $-18x^2 - 33x + 63$

Factoring Quadratic Expressions (C) Answers

Name: _____

Date: _____

Factor each expression.

1. $60x^2 - 115x + 25$

$5(3x - 5)(4x - 1)$

2. $-32x^2 + 284x + 36$

$-4(x - 9)(8x + 1)$

3. $-80x^2 - 204x - 112$

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

4. $-162x^2 - 108x + 32$

$-2(9x + 8)(9x - 2)$

5. $-108x^2 - 30x + 112$

$-2(6x + 7)(9x - 8)$

6. $-5x^2 + 70x - 225$

$-5(x - 5)(x - 9)$

7. $-320x^2 + 320x - 75$

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

8. $-84x^2 + 2x + 60$

$-2(7x - 6)(6x + 5)$

9. $60x^2 - 112x + 48$

$4(5x - 6)(3x - 2)$

10. $-135x^2 - 114x - 24$

$-3(9x + 4)(5x + 2)$

11. $42x^2 + 8x - 24$

$2(7x + 6)(3x - 2)$

12. $-128x^2 - 64x - 6$

$-2(8x + 1)(8x + 3)$

13. $72x^2 + 20x - 28$

$4(9x + 7)(2x - 1)$

14. $-50x^2 - 85x + 315$

$-5(5x - 9)(2x + 7)$

15. $15x^2 - 69x + 36$

$3(x - 4)(5x - 3)$

16. $54x^2 + 45x - 75$

$3(6x - 5)(3x + 5)$

17. $36x^2 + 144x + 140$

$4(3x + 7)(3x + 5)$

18. $64x^2 - 264x + 140$

$4(8x - 5)(2x - 7)$

19. $12x^2 - 14x - 10$

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

20. $-18x^2 - 33x + 63$

$-3(x + 3)(6x - 7)$

Factoring Quadratic Expressions (D)

Name: _____

Date: _____

Factor each expression.

1. $180x^2 + 300x + 125$

11. $84x^2 + 58x - 10$

2. $-60x^2 + 80x - 25$

12. $32x^2 - 12x - 54$

3. $324x^2 - 36x - 224$

13. $40x^2 + 50x + 15$

4. $-108x^2 + 216x - 105$

14. $16x^2 - 4x - 72$

5. $48x^2 + 54x + 15$

15. $-32x^2 + 36x - 4$

6. $-135x^2 + 204x - 21$

16. $21x^2 + 120x - 36$

7. $36x^2 - 78x - 14$

17. $-72x^2 - 183x - 105$

8. $-135x^2 - 15x + 10$

18. $36x^2 + 232x + 96$

9. $-50x^2 + 215x - 140$

19. $-90x^2 - 165x - 25$

10. $-144x^2 - 6x + 3$

20. $270x^2 + 195x - 140$

Factoring Quadratic Expressions (D) Answers

Name: _____

Date: _____

Factor each expression.

1. $180x^2 + 300x + 125$

$$5(6x + 5)(6x + 5) = 5(6x + 5)^2$$

2. $-60x^2 + 80x - 25$

$$-5(2x - 1)(6x - 5)$$

3. $324x^2 - 36x - 224$

$$4(9x - 8)(9x + 7)$$

4. $-108x^2 + 216x - 105$

$$-3(6x - 7)(6x - 5)$$

5. $48x^2 + 54x + 15$

$$3(8x + 5)(2x + 1)$$

6. $-135x^2 + 204x - 21$

$$-3(5x - 7)(9x - 1)$$

7. $36x^2 - 78x - 14$

$$2(3x - 7)(6x + 1)$$

8. $-135x^2 - 15x + 10$

$$-5(3x + 1)(9x - 2)$$

9. $-50x^2 + 215x - 140$

$$-5(2x - 7)(5x - 4)$$

10. $-144x^2 - 6x + 3$

$$-3(6x + 1)(8x - 1)$$

11. $84x^2 + 58x - 10$

$$2(7x - 1)(6x + 5)$$

12. $32x^2 - 12x - 54$

$$2(2x - 3)(8x + 9)$$

13. $40x^2 + 50x + 15$

$$5(2x + 1)(4x + 3)$$

14. $16x^2 - 4x - 72$

$$4(4x - 9)(x + 2)$$

15. $-32x^2 + 36x - 4$

$$-4(8x - 1)(x - 1)$$

16. $21x^2 + 120x - 36$

$$3(7x - 2)(x + 6)$$

17. $-72x^2 - 183x - 105$

$$-3(3x + 5)(8x + 7)$$

18. $36x^2 + 232x + 96$

$$4(x + 6)(9x + 4)$$

19. $-90x^2 - 165x - 25$

$$-5(3x + 5)(6x + 1)$$

20. $270x^2 + 195x - 140$

$$5(6x + 7)(9x - 4)$$

Factoring Quadratic Expressions (E)

Name: _____

Date: _____

Factor each expression.

1. $270x^2 + 525x + 245$

11. $-150x^2 + 85x - 10$

2. $112x^2 + 46x - 90$

12. $100x^2 - 315x + 245$

3. $18x^2 + 98x + 40$

13. $-120x^2 - 310x - 175$

4. $100x^2 - 80x - 128$

14. $-24x^2 - 42x + 45$

5. $-18x^2 + 141x - 105$

15. $-2x^2 + 22x - 36$

6. $12x^2 + 40x - 100$

16. $36x^2 + 124x - 80$

7. $-48x^2 - 164x - 140$

17. $100x^2 - 80x + 16$

8. $75x^2 + 45x + 6$

18. $125x^2 - 200x + 60$

9. $-20x^2 + 140x - 225$

19. $252x^2 - 200x + 32$

10. $-32x^2 - 88x - 36$

20. $-162x^2 - 207x - 21$

Factoring Quadratic Expressions (E) Answers

Name: _____

Date: _____

Factor each expression.

1. $270x^2 + 525x + 245$

$5(9x + 7)(6x + 7)$

2. $112x^2 + 46x - 90$

$2(7x - 5)(8x + 9)$

3. $18x^2 + 98x + 40$

$2(9x + 4)(x + 5)$

4. $100x^2 - 80x - 128$

$4(5x - 8)(5x + 4)$

5. $-18x^2 + 141x - 105$

$-3(x - 7)(6x - 5)$

6. $12x^2 + 40x - 100$

$4(3x - 5)(x + 5)$

7. $-48x^2 - 164x - 140$

$-4(3x + 5)(4x + 7)$

8. $75x^2 + 45x + 6$

$3(5x + 1)(5x + 2)$

9. $-20x^2 + 140x - 225$

$-5(2x - 5)(2x - 9)$

10. $-32x^2 - 88x - 36$

$-4(2x + 1)(4x + 9)$

11. $-150x^2 + 85x - 10$

$-5(6x - 1)(5x - 2)$

12. $100x^2 - 315x + 245$

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

13. $-120x^2 - 310x - 175$

$-5(4x + 7)(6x + 5)$

14. $-24x^2 - 42x + 45$

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

15. $-2x^2 + 22x - 36$

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

16. $36x^2 + 124x - 80$

$4(x + 4)(9x - 5)$

17. $100x^2 - 80x + 16$

$4(5x - 2)(5x - 2) = 4(5x - 2)^2$

18. $125x^2 - 200x + 60$

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

19. $252x^2 - 200x + 32$

$4(7x - 4)(9x - 2)$

20. $-162x^2 - 207x - 21$

$-3(9x + 1)(6x + 7)$

Factoring Quadratic Expressions (F)

Name: _____

Date: _____

Factor each expression.

1. $36x^2 - 111x + 84$

11. $-120x^2 - 205x + 175$

2. $180x^2 + 240x + 35$

12. $-96x^2 - 84x - 9$

3. $45x^2 - 15x - 100$

13. $-108x^2 + 276x - 160$

4. $-48x^2 + 44x - 6$

14. $12x^2 + 87x - 72$

5. $-45x^2 + 87x - 24$

15. $-24x^2 - 66x - 27$

6. $-315x^2 + 415x - 120$

16. $84x^2 - 74x + 10$

7. $40x^2 + 2x - 60$

17. $-10x^2 - 48x - 32$

8. $64x^2 + 120x + 54$

18. $-12x^2 + 104x - 192$

9. $70x^2 - 145x + 60$

19. $-72x^2 + 78x + 189$

10. $24x^2 - 76x - 28$

20. $60x^2 - 147x + 90$

Factoring Quadratic Expressions (F) Answers

Name: _____

Date: _____

Factor each expression.

1. $36x^2 - 111x + 84$

$3(4x - 7)(3x - 4)$

2. $180x^2 + 240x + 35$

$5(6x + 1)(6x + 7)$

3. $45x^2 - 15x - 100$

$5(3x + 4)(3x - 5)$

4. $-48x^2 + 44x - 6$

$-2(4x - 3)(6x - 1)$

5. $-45x^2 + 87x - 24$

$-3(3x - 1)(5x - 8)$

6. $-315x^2 + 415x - 120$

$-5(7x - 3)(9x - 8)$

7. $40x^2 + 2x - 60$

$2(5x - 6)(4x + 5)$

8. $64x^2 + 120x + 54$

$2(4x + 3)(8x + 9)$

9. $70x^2 - 145x + 60$

$5(7x - 4)(2x - 3)$

10. $24x^2 - 76x - 28$

$4(3x + 1)(2x - 7)$

11. $-120x^2 - 205x + 175$

$-5(8x - 5)(3x + 7)$

12. $-96x^2 - 84x - 9$

$-3(4x + 3)(8x + 1)$

13. $-108x^2 + 276x - 160$

$-4(9x - 8)(3x - 5)$

14. $12x^2 + 87x - 72$

$3(4x - 3)(x + 8)$

15. $-24x^2 - 66x - 27$

$-3(2x + 1)(4x + 9)$

16. $84x^2 - 74x + 10$

$2(6x - 1)(7x - 5)$

17. $-10x^2 - 48x - 32$

$-2(5x + 4)(x + 4)$

18. $-12x^2 + 104x - 192$

$-4(3x - 8)(x - 6)$

19. $-72x^2 + 78x + 189$

$-3(6x + 7)(4x - 9)$

20. $60x^2 - 147x + 90$

$3(5x - 6)(4x - 5)$

Factoring Quadratic Expressions (G)

Name: _____

Date: _____

Factor each expression.

1. $96x^2 - 92x + 20$

11. $36x^2 + 112x + 12$

2. $75x^2 + 235x + 180$

12. $128x^2 - 112x + 12$

3. $120x^2 + 175x - 245$

13. $81x^2 - 180x + 75$

4. $-70x^2 + 45x + 90$

14. $2x^2 + 4x - 16$

5. $-15x^2 + 78x - 15$

15. $-189x^2 - 300x - 96$

6. $-162x^2 - 117x - 15$

16. $-48x^2 - 44x + 70$

7. $-8x^2 + 54x - 36$

17. $-35x^2 - 60x + 135$

8. $-45x^2 - 250x - 125$

18. $108x^2 + 240x + 128$

9. $-84x^2 - 110x - 16$

19. $147x^2 - 63x - 12$

10. $80x^2 + 350x - 45$

20. $126x^2 - 152x + 42$

Factoring Quadratic Expressions (G) Answers

Name: _____

Date: _____

Factor each expression.

1. $96x^2 - 92x + 20$

$4(8x - 5)(3x - 1)$

2. $75x^2 + 235x + 180$

$5(3x + 4)(5x + 9)$

3. $120x^2 + 175x - 245$

$5(8x - 7)(3x + 7)$

4. $-70x^2 + 45x + 90$

$-5(2x - 3)(7x + 6)$

5. $-15x^2 + 78x - 15$

$-3(x - 5)(5x - 1)$

6. $-162x^2 - 117x - 15$

$-3(6x + 1)(9x + 5)$

7. $-8x^2 + 54x - 36$

$-2(x - 6)(4x - 3)$

8. $-45x^2 - 250x - 125$

$-5(9x + 5)(x + 5)$

9. $-84x^2 - 110x - 16$

$-2(7x + 8)(6x + 1)$

10. $80x^2 + 350x - 45$

$5(8x - 1)(2x + 9)$

11. $36x^2 + 112x + 12$

$4(9x + 1)(x + 3)$

12. $128x^2 - 112x + 12$

$4(4x - 3)(8x - 1)$

13. $81x^2 - 180x + 75$

$3(3x - 5)(9x - 5)$

14. $2x^2 + 4x - 16$

$2(x - 2)(x + 4)$

15. $-189x^2 - 300x - 96$

$-3(9x + 4)(7x + 8)$

16. $-48x^2 - 44x + 70$

$-2(6x - 5)(4x + 7)$

17. $-35x^2 - 60x + 135$

$-5(x + 3)(7x - 9)$

18. $108x^2 + 240x + 128$

$4(3x + 4)(9x + 8)$

19. $147x^2 - 63x - 12$

$3(7x + 1)(7x - 4)$

20. $126x^2 - 152x + 42$

$2(9x - 7)(7x - 3)$

Factoring Quadratic Expressions (H)

Name: _____

Date: _____

Factor each expression.

1. $160x^2 + 68x - 48$

11. $-98x^2 - 112x - 24$

2. $-14x^2 - 130x - 144$

12. $-162x^2 - 207x - 21$

3. $96x^2 - 76x - 42$

13. $-225x^2 - 485x - 200$

4. $-112x^2 + 236x + 36$

14. $180x^2 + 385x + 200$

5. $18x^2 - 75x - 75$

15. $-48x^2 + 30x + 27$

6. $40x^2 + 155x - 20$

16. $-48x^2 + 44x - 6$

7. $45x^2 - 65x + 20$

17. $360x^2 + 505x + 175$

8. $-18x^2 - 8x + 10$

18. $112x^2 - 102x + 20$

9. $70x^2 + 2x - 24$

19. $224x^2 - 284x + 32$

10. $192x^2 + 152x + 20$

20. $144x^2 + 102x - 21$

Factoring Quadratic Expressions (H) Answers

Name: _____

Date: _____

Factor each expression.

1. $160x^2 + 68x - 48$

$4(8x - 3)(5x + 4)$

2. $-14x^2 - 130x - 144$

$-2(x + 8)(7x + 9)$

3. $96x^2 - 76x - 42$

$2(6x - 7)(8x + 3)$

4. $-112x^2 + 236x + 36$

$-4(4x - 9)(7x + 1)$

5. $18x^2 - 75x - 75$

$3(6x + 5)(x - 5)$

6. $40x^2 + 155x - 20$

$5(8x - 1)(x + 4)$

7. $45x^2 - 65x + 20$

$5(x - 1)(9x - 4)$

8. $-18x^2 - 8x + 10$

$-2(9x - 5)(x + 1)$

9. $70x^2 + 2x - 24$

$2(7x - 4)(5x + 3)$

10. $192x^2 + 152x + 20$

$4(8x + 5)(6x + 1)$

11. $-98x^2 - 112x - 24$

$-2(7x + 2)(7x + 6)$

12. $-162x^2 - 207x - 21$

$-3(6x + 7)(9x + 1)$

13. $-225x^2 - 485x - 200$

$-5(5x + 8)(9x + 5)$

14. $180x^2 + 385x + 200$

$5(9x + 8)(4x + 5)$

15. $-48x^2 + 30x + 27$

$-3(8x - 9)(2x + 1)$

16. $-48x^2 + 44x - 6$

$-2(4x - 3)(6x - 1)$

17. $360x^2 + 505x + 175$

$5(9x + 7)(8x + 5)$

18. $112x^2 - 102x + 20$

$2(7x - 2)(8x - 5)$

19. $224x^2 - 284x + 32$

$4(8x - 1)(7x - 8)$

20. $144x^2 + 102x - 21$

$3(6x - 1)(8x + 7)$

Factoring Quadratic Expressions (I)

Name: _____

Date: _____

Factor each expression.

1. $18x^2 + 22x + 4$

11. $8x^2 + 36x - 140$

2. $-150x^2 + 215x - 75$

12. $108x^2 - 228x - 56$

3. $-160x^2 + 372x - 216$

13. $-20x^2 - 188x - 224$

4. $-4x^2 + 18x + 10$

14. $-112x^2 + 74x - 12$

5. $81x^2 + 198x - 48$

15. $-112x^2 + 26x + 6$

6. $-40x^2 - 30x + 135$

16. $21x^2 + 99x - 162$

7. $-56x^2 + 204x + 216$

17. $32x^2 - 88x - 252$

8. $72x^2 - 96x + 14$

18. $6x^2 + 21x + 18$

9. $90x^2 - 82x + 8$

19. $32x^2 + 12x - 14$

10. $-9x^2 + 87x - 168$

20. $200x^2 - 255x + 70$

Factoring Quadratic Expressions (I) Answers

Name: _____

Date: _____

Factor each expression.

1. $18x^2 + 22x + 4$

$2(9x + 2)(x + 1)$

2. $-150x^2 + 215x - 75$

$-5(6x - 5)(5x - 3)$

3. $-160x^2 + 372x - 216$

$-4(5x - 6)(8x - 9)$

4. $-4x^2 + 18x + 10$

$-2(x - 5)(2x + 1)$

5. $81x^2 + 198x - 48$

$3(9x - 2)(3x + 8)$

6. $-40x^2 - 30x + 135$

$-5(4x + 9)(2x - 3)$

7. $-56x^2 + 204x + 216$

$-4(2x - 9)(7x + 6)$

8. $72x^2 - 96x + 14$

$2(6x - 7)(6x - 1)$

9. $90x^2 - 82x + 8$

$2(5x - 4)(9x - 1)$

10. $-9x^2 + 87x - 168$

$-3(3x - 8)(x - 7)$

11. $8x^2 + 36x - 140$

$4(2x - 5)(x + 7)$

12. $108x^2 - 228x - 56$

$4(3x - 7)(9x + 2)$

13. $-20x^2 - 188x - 224$

$-4(x + 8)(5x + 7)$

14. $-112x^2 + 74x - 12$

$-2(8x - 3)(7x - 2)$

15. $-112x^2 + 26x + 6$

$-2(7x + 1)(8x - 3)$

16. $21x^2 + 99x - 162$

$3(x + 6)(7x - 9)$

17. $32x^2 - 88x - 252$

$4(2x - 9)(4x + 7)$

18. $6x^2 + 21x + 18$

$3(2x + 3)(x + 2)$

19. $32x^2 + 12x - 14$

$2(2x - 1)(8x + 7)$

20. $200x^2 - 255x + 70$

$5(5x - 2)(8x - 7)$

Factoring Quadratic Expressions (J)

Name: _____

Date: _____

Factor each expression.

1. $-30x^2 + 9x + 3$

11. $32x^2 - 68x - 30$

2. $-96x^2 - 308x - 196$

12. $-36x^2 + 256$

3. $45x^2 - 24x - 36$

13. $-16x^2 - 50x - 36$

4. $-108x^2 + 180x - 75$

14. $28x^2 - 96x - 64$

5. $60x^2 - 38x - 126$

15. $45x^2 + 90x + 40$

6. $63x^2 + 15x - 18$

16. $54x^2 - 102x + 20$

7. $-56x^2 + 54x - 10$

17. $63x^2 + 111x + 36$

8. $-280x^2 - 675x - 405$

18. $-32x^2 - 72x + 140$

9. $-48x^2 + 68x + 90$

19. $-36x^2 + 60x - 9$

10. $245x^2 - 245x + 60$

20. $12x^2 - 44x + 40$

Factoring Quadratic Expressions (J) Answers

Name: _____

Date: _____

Factor each expression.

1. $-30x^2 + 9x + 3$

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

2. $-96x^2 - 308x - 196$

$-4(3x + 7)(8x + 7)$

3. $45x^2 - 24x - 36$

$3(3x + 2)(5x - 6)$

4. $-108x^2 + 180x - 75$

$-3(6x - 5)(6x - 5) = -3(6x - 5)^2$

5. $60x^2 - 38x - 126$

$2(5x - 9)(6x + 7)$

6. $63x^2 + 15x - 18$

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

7. $-56x^2 + 54x - 10$

$-2(7x - 5)(4x - 1)$

8. $-280x^2 - 675x - 405$

$-5(7x + 9)(8x + 9)$

9. $-48x^2 + 68x + 90$

$-2(6x + 5)(4x - 9)$

10. $245x^2 - 245x + 60$

$5(7x - 3)(7x - 4)$

11. $32x^2 - 68x - 30$

$2(2x - 5)(8x + 3)$

12. $-36x^2 + 256$

$-4(3x + 8)(3x - 8)$

13. $-16x^2 - 50x - 36$

$-2(x + 2)(8x + 9)$

14. $28x^2 - 96x - 64$

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

15. $45x^2 + 90x + 40$

$5(3x + 2)(3x + 4)$

16. $54x^2 - 102x + 20$

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

17. $63x^2 + 111x + 36$

$3(3x + 4)(7x + 3)$

18. $-32x^2 - 72x + 140$

$-4(2x + 7)(4x - 5)$

19. $-36x^2 + 60x - 9$

$-3(2x - 3)(6x - 1)$

20. $12x^2 - 44x + 40$

$4(x - 2)(3x - 5)$