

Factoring Quadratic Expressions (A)

Name: _____

Date: _____

Factor each expression.

1. $3x^2 - 9x - 162$

11. $4x^2 - 4x - 224$

2. $-4x^2 + 40x - 96$

12. $5x^2 - 30x - 35$

3. $-5x^2 + 15x + 270$

13. $5x^2 - 60x + 135$

4. $3x^2 + 6x - 24$

14. $2x^2 + 24x + 54$

5. $-4x^2 + 32x - 28$

15. $3x^2 + 30x + 63$

6. $-3x^2 + 18x - 24$

16. $3x^2 + 54x + 243$

7. $2x^2 + 16x + 24$

17. $4x^2 + 52x + 160$

8. $3x^2 - 48$

18. $-4x^2 - 16x + 180$

9. $-5x^2 - 40x - 75$

19. $5x^2 - 85x + 360$

10. $-4x^2 + 56x - 192$

20. $3x^2 - 21x + 30$

Factoring Quadratic Expressions (A) Answers

Name: _____

Date: _____

Factor each expression.

1. $3x^2 - 9x - 162$

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

2. $-4x^2 + 40x - 96$

$-4(x - 4)(x - 6)$

3. $-5x^2 + 15x + 270$

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

4. $3x^2 + 6x - 24$

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

5. $-4x^2 + 32x - 28$

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

6. $-3x^2 + 18x - 24$

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

7. $2x^2 + 16x + 24$

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

8. $3x^2 - 48$

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

9. $-5x^2 - 40x - 75$

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

10. $-4x^2 + 56x - 192$

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

11. $4x^2 - 4x - 224$

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

12. $5x^2 - 30x - 35$

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

13. $5x^2 - 60x + 135$

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

14. $2x^2 + 24x + 54$

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

15. $3x^2 + 30x + 63$

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

16. $3x^2 + 54x + 243$

$3(x + 9)(x + 9) = 3(x + 9)^2$

17. $4x^2 + 52x + 160$

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

18. $-4x^2 - 16x + 180$

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

19. $5x^2 - 85x + 360$

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

20. $3x^2 - 21x + 30$

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

Factoring Quadratic Expressions (B)

Name: _____

Date: _____

Factor each expression.

1. $3x^2 - 3x - 36$

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

2. $5x^2 - 80x + 320$

12. $-2x^2 - 18x - 40$

3. $-3x^2 + 9x + 84$

13. $-3x^2 - 9x + 120$

4. $5x^2 - 55x + 140$

14. $5x^2 - 45x + 70$

5. $-5x^2 + 20x + 225$

15. $4x^2 + 40x + 84$

6. $5x^2 + 10x + 5$

16. $-3x^2 - 33x - 90$

7. $-3x^2 + 9x + 120$

17. $-4x^2 + 8x + 96$

8. $3x^2 - 15x - 18$

18. $5x^2 - 30x - 35$

9. $5x^2 - 25x - 30$

19. $2x^2 + 2x - 24$

10. $-4x^2 + 32x - 64$

20. $-4x^2 + 16x + 48$

Factoring Quadratic Expressions (B) Answers

Name: _____

Date: _____

Factor each expression.

1. $3x^2 - 3x - 36$

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

2. $5x^2 - 80x + 320$

$$5(x - 8)(x - 8) = 5(x - 8)^2$$

3. $-3x^2 + 9x + 84$

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

4. $5x^2 - 55x + 140$

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

5. $-5x^2 + 20x + 225$

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

6. $5x^2 + 10x + 5$

$$5(x + 1)(x + 1) = 5(x + 1)^2$$

7. $-3x^2 + 9x + 120$

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

8. $3x^2 - 15x - 18$

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

9. $5x^2 - 25x - 30$

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

10. $-4x^2 + 32x - 64$

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

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

$$3(x + 1)(x + 1) = 3(x + 1)^2$$

12. $-2x^2 - 18x - 40$

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

13. $-3x^2 - 9x + 120$

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

14. $5x^2 - 45x + 70$

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

15. $4x^2 + 40x + 84$

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

16. $-3x^2 - 33x - 90$

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

17. $-4x^2 + 8x + 96$

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

18. $5x^2 - 30x - 35$

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

19. $2x^2 + 2x - 24$

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

20. $-4x^2 + 16x + 48$

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

Factoring Quadratic Expressions (C)

Name: _____

Date: _____

Factor each expression.

1. $-2x^2 - 2x + 112$

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

2. $3x^2 + 36x + 81$

12. $4x^2 - 44x + 72$

3. $4x^2 + 24x + 36$

13. $3x^2 - 75$

4. $-5x^2 + 10x + 240$

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

5. $-4x^2 - 44x - 112$

15. $-2x^2 - 4x + 126$

6. $2x^2 + 18x + 40$

16. $4x^2 + 48x + 108$

7. $4x^2 - 8x - 96$

17. $3x^2 - 3$

8. $-5x^2 - 5x + 210$

18. $-4x^2 - 36x - 32$

9. $-2x^2 + 10x + 48$

19. $-5x^2 - 10x + 15$

10. $-3x^2 + 33x - 72$

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

Factoring Quadratic Expressions (C) Answers

Name: _____

Date: _____

Factor each expression.

1. $-2x^2 - 2x + 112$

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

2. $3x^2 + 36x + 81$

$3(x + 9)(x + 3)$

3. $4x^2 + 24x + 36$

$4(x + 3)(x + 3) = 4(x + 3)^2$

4. $-5x^2 + 10x + 240$

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

5. $-4x^2 - 44x - 112$

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

6. $2x^2 + 18x + 40$

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

7. $4x^2 - 8x - 96$

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

8. $-5x^2 - 5x + 210$

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

9. $-2x^2 + 10x + 48$

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

10. $-3x^2 + 33x - 72$

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

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

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

12. $4x^2 - 44x + 72$

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

13. $3x^2 - 75$

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

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

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

15. $-2x^2 - 4x + 126$

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

16. $4x^2 + 48x + 108$

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

17. $3x^2 - 3$

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

18. $-4x^2 - 36x - 32$

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

19. $-5x^2 - 10x + 15$

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

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

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

Factoring Quadratic Expressions (D)

Name: _____

Date: _____

Factor each expression.

1. $3x^2 - 9x + 6$

11. $-4x^2 + 56x - 196$

2. $3x^2 - 9x - 12$

12. $3x^2 + 30x + 72$

3. $-4x^2 + 4x + 120$

13. $5x^2 - 70x + 245$

4. $3x^2 - 9x - 120$

14. $-2x^2 + 8x + 42$

5. $-5x^2 - 60x - 160$

15. $-2x^2 + 32$

6. $4x^2 - 20x - 96$

16. $-4x^2 - 52x - 160$

7. $2x^2 - 16x - 18$

17. $5x^2 - 40x + 35$

8. $-5x^2 + 50x - 105$

18. $-5x^2 + 5x + 30$

9. $-4x^2 - 8x + 252$

19. $-2x^2 + 162$

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

20. $-5x^2 - 50x - 80$

Factoring Quadratic Expressions (D) Answers

Name: _____

Date: _____

Factor each expression.

1. $3x^2 - 9x + 6$

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

2. $3x^2 - 9x - 12$

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

3. $-4x^2 + 4x + 120$

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

4. $3x^2 - 9x - 120$

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

5. $-5x^2 - 60x - 160$

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

6. $4x^2 - 20x - 96$

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

7. $2x^2 - 16x - 18$

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

8. $-5x^2 + 50x - 105$

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

9. $-4x^2 - 8x + 252$

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

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

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

11. $-4x^2 + 56x - 196$

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

12. $3x^2 + 30x + 72$

$3(x + 6)(x + 4)$

13. $5x^2 - 70x + 245$

$5(x - 7)(x - 7) = 5(x - 7)^2$

14. $-2x^2 + 8x + 42$

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

15. $-2x^2 + 32$

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

16. $-4x^2 - 52x - 160$

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

17. $5x^2 - 40x + 35$

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

18. $-5x^2 + 5x + 30$

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

19. $-2x^2 + 162$

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

20. $-5x^2 - 50x - 80$

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

Factoring Quadratic Expressions (E)

Name: _____

Date: _____

Factor each expression.

1. $5x^2 - 5x - 360$

11. $3x^2 + 3x - 6$

2. $4x^2 - 8x - 96$

12. $-5x^2 + 30x + 35$

3. $-2x^2 - 20x - 50$

13. $4x^2 + 60x + 216$

4. $-2x^2 - 2x + 84$

14. $4x^2 - 8x - 140$

5. $3x^2 - 21x + 36$

15. $-3x^2 + 3x + 36$

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

16. $5x^2 + 90x + 405$

7. $-5x^2 - 5x + 30$

17. $5x^2 - 25x - 70$

8. $2x^2 + 28x + 96$

18. $-5x^2 - 50x - 120$

9. $4x^2 - 12x - 72$

19. $-4x^2 + 64x - 252$

10. $-5x^2 + 20$

20. $5x^2 - 35x + 60$

Factoring Quadratic Expressions (E) Answers

Name: _____

Date: _____

Factor each expression.

1. $5x^2 - 5x - 360$

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

2. $4x^2 - 8x - 96$

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

3. $-2x^2 - 20x - 50$

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

4. $-2x^2 - 2x + 84$

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

5. $3x^2 - 21x + 36$

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

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

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

7. $-5x^2 - 5x + 30$

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

8. $2x^2 + 28x + 96$

$2(x + 6)(x + 8)$

9. $4x^2 - 12x - 72$

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

10. $-5x^2 + 20$

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

11. $3x^2 + 3x - 6$

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

12. $-5x^2 + 30x + 35$

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

13. $4x^2 + 60x + 216$

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

14. $4x^2 - 8x - 140$

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

15. $-3x^2 + 3x + 36$

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

16. $5x^2 + 90x + 405$

$5(x + 9)(x + 9) = 5(x + 9)^2$

17. $5x^2 - 25x - 70$

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

18. $-5x^2 - 50x - 120$

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

19. $-4x^2 + 64x - 252$

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

20. $5x^2 - 35x + 60$

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

Factoring Quadratic Expressions (F)

Name: _____

Date: _____

Factor each expression.

1. $-2x^2 + 4x + 96$

11. $-2x^2 - 10x + 72$

2. $5x^2 + 75x + 280$

12. $-2x^2 + 6x + 8$

3. $-5x^2 + 5$

13. $-3x^2 + 48x - 189$

4. $5x^2 + 85x + 360$

14. $3x^2 - 42x + 135$

5. $-3x^2 + 6x + 9$

15. $-2x^2 + 24x - 54$

6. $-2x^2 + 72$

16. $4x^2 + 40x + 64$

7. $-2x^2 + 26x - 80$

17. $2x^2 + 32x + 128$

8. $-5x^2 + 20x + 25$

18. $2x^2 - 20x + 32$

9. $3x^2 - 27x + 60$

19. $4x^2 + 28x + 40$

10. $5x^2 + 70x + 225$

20. $2x^2 - 26x + 72$

Factoring Quadratic Expressions (F) Answers

Name: _____

Date: _____

Factor each expression.

1. $-2x^2 + 4x + 96$

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

2. $5x^2 + 75x + 280$

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

3. $-5x^2 + 5$

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

4. $5x^2 + 85x + 360$

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

5. $-3x^2 + 6x + 9$

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

6. $-2x^2 + 72$

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

7. $-2x^2 + 26x - 80$

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

8. $-5x^2 + 20x + 25$

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

9. $3x^2 - 27x + 60$

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

10. $5x^2 + 70x + 225$

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

11. $-2x^2 - 10x + 72$

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

12. $-2x^2 + 6x + 8$

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

13. $-3x^2 + 48x - 189$

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

14. $3x^2 - 42x + 135$

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

15. $-2x^2 + 24x - 54$

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

16. $4x^2 + 40x + 64$

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

17. $2x^2 + 32x + 128$

$2(x + 8)(x + 8) = 2(x + 8)^2$

18. $2x^2 - 20x + 32$

$2(x - 2)(x - 8)$

19. $4x^2 + 28x + 40$

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

20. $2x^2 - 26x + 72$

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

Factoring Quadratic Expressions (G)

Name: _____

Date: _____

Factor each expression.

1. $5x^2 - 45x + 90$

11. $2x^2 + 2x - 112$

2. $5x^2 + 15x - 50$

12. $-4x^2 + 12x - 8$

3. $4x^2 - 16x - 180$

13. $3x^2 + 3x - 18$

4. $5x^2 + 5x - 100$

14. $-3x^2 - 3x + 126$

5. $5x^2 + 15x - 90$

15. $-4x^2 + 100$

6. $-3x^2 - 3x + 90$

16. $3x^2 - 30x + 63$

7. $-2x^2 + 8x + 42$

17. $-2x^2 - 10x + 72$

8. $-2x^2 + 128$

18. $5x^2 + 60x + 135$

9. $-3x^2 - 15x + 18$

19. $-5x^2 - 30x - 40$

10. $2x^2 - 98$

20. $-2x^2 - 6x + 108$

Factoring Quadratic Expressions (G) Answers

Name: _____

Date: _____

Factor each expression.

1. $5x^2 - 45x + 90$

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

2. $5x^2 + 15x - 50$

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

3. $4x^2 - 16x - 180$

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

4. $5x^2 + 5x - 100$

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

5. $5x^2 + 15x - 90$

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

6. $-3x^2 - 3x + 90$

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

7. $-2x^2 + 8x + 42$

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

8. $-2x^2 + 128$

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

9. $-3x^2 - 15x + 18$

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

10. $2x^2 - 98$

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

11. $2x^2 + 2x - 112$

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

12. $-4x^2 + 12x - 8$

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

13. $3x^2 + 3x - 18$

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

14. $-3x^2 - 3x + 126$

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

15. $-4x^2 + 100$

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

16. $3x^2 - 30x + 63$

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

17. $-2x^2 - 10x + 72$

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

18. $5x^2 + 60x + 135$

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

19. $-5x^2 - 30x - 40$

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

20. $-2x^2 - 6x + 108$

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

Factoring Quadratic Expressions (H)

Name: _____

Date: _____

Factor each expression.

1. $4x^2 - 52x + 160$

11. $5x^2 - 25x + 30$

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

12. $3x^2 + 45x + 168$

3. $-5x^2 - 65x - 200$

13. $5x^2 + 40x - 45$

4. $-4x^2 + 100$

14. $-5x^2 - 30x - 45$

5. $-3x^2 + 3x + 36$

15. $3x^2 + 36x + 105$

6. $-4x^2 + 16x + 48$

16. $-3x^2 - 21x - 30$

7. $-3x^2 + 36x - 105$

17. $-3x^2 - 3x + 60$

8. $-3x^2 - 27x - 54$

18. $5x^2 - 25x - 180$

9. $4x^2 + 36x + 56$

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

10. $-2x^2 + 16x - 24$

20. $-3x^2 - 9x + 162$

Factoring Quadratic Expressions (H) Answers

Name: _____

Date: _____

Factor each expression.

1. $4x^2 - 52x + 160$

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

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

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

3. $-5x^2 - 65x - 200$

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

4. $-4x^2 + 100$

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

5. $-3x^2 + 3x + 36$

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

6. $-4x^2 + 16x + 48$

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

7. $-3x^2 + 36x - 105$

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

8. $-3x^2 - 27x - 54$

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

9. $4x^2 + 36x + 56$

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

10. $-2x^2 + 16x - 24$

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

11. $5x^2 - 25x + 30$

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

12. $3x^2 + 45x + 168$

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

13. $5x^2 + 40x - 45$

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

14. $-5x^2 - 30x - 45$

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

15. $3x^2 + 36x + 105$

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

16. $-3x^2 - 21x - 30$

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

17. $-3x^2 - 3x + 60$

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

18. $5x^2 - 25x - 180$

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

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

$-2(x - 2)(x - 3)$

20. $-3x^2 - 9x + 162$

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

Factoring Quadratic Expressions (I)

Name: _____

Date: _____

Factor each expression.

1. $-3x^2 - 42x - 144$

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

2. $4x^2 + 16x - 20$

12. $-2x^2 - 24x - 64$

3. $3x^2 + 6x - 24$

13. $-3x^2 + 42x - 144$

4. $-3x^2 + 21x - 18$

14. $-2x^2 + 20x - 48$

5. $-2x^2 - 24x - 72$

15. $-4x^2 + 144$

6. $4x^2 - 28x + 40$

16. $2x^2 - 4x - 48$

7. $-2x^2 - 22x - 60$

17. $2x^2 - 20x + 42$

8. $-4x^2 + 32x - 60$

18. $2x^2 - 28x + 98$

9. $2x^2 + 16x + 24$

19. $-5x^2 + 40x - 35$

10. $-2x^2 + 24x - 70$

20. $5x^2 - 50x + 80$

Factoring Quadratic Expressions (I) Answers

Name: _____

Date: _____

Factor each expression.

1. $-3x^2 - 42x - 144$

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

2. $4x^2 + 16x - 20$

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

3. $3x^2 + 6x - 24$

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

4. $-3x^2 + 21x - 18$

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

5. $-2x^2 - 24x - 72$

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

6. $4x^2 - 28x + 40$

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

7. $-2x^2 - 22x - 60$

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

8. $-4x^2 + 32x - 60$

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

9. $2x^2 + 16x + 24$

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

10. $-2x^2 + 24x - 70$

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

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

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

12. $-2x^2 - 24x - 64$

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

13. $-3x^2 + 42x - 144$

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

14. $-2x^2 + 20x - 48$

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

15. $-4x^2 + 144$

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

16. $2x^2 - 4x - 48$

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

17. $2x^2 - 20x + 42$

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

18. $2x^2 - 28x + 98$

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

19. $-5x^2 + 40x - 35$

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

20. $5x^2 - 50x + 80$

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

Factoring Quadratic Expressions (J)

Name: _____

Date: _____

Factor each expression.

1. $2x^2 + 2x - 40$

11. $4x^2 + 24x - 64$

2. $-2x^2 - 26x - 80$

12. $2x^2 - 98$

3. $4x^2 + 16x + 16$

13. $3x^2 - 36x + 108$

4. $3x^2 + 9x - 84$

14. $-4x^2 - 8x + 12$

5. $-5x^2 + 320$

15. $-4x^2 - 56x - 192$

6. $-2x^2 + 24x - 64$

16. $-5x^2 - 30x - 40$

7. $2x^2 - 8$

17. $2x^2 + 4x - 126$

8. $3x^2 + 15x - 72$

18. $5x^2 + 45x + 100$

9. $4x^2 + 28x + 40$

19. $4x^2 + 44x + 96$

10. $-3x^2 - 24x - 48$

20. $5x^2 + 55x + 140$

Factoring Quadratic Expressions (J) Answers

Name: _____

Date: _____

Factor each expression.

1. $2x^2 + 2x - 40$

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

2. $-2x^2 - 26x - 80$

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

3. $4x^2 + 16x + 16$

$4(x + 2)(x + 2) = 4(x + 2)^2$

4. $3x^2 + 9x - 84$

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

5. $-5x^2 + 320$

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

6. $-2x^2 + 24x - 64$

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

7. $2x^2 - 8$

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

8. $3x^2 + 15x - 72$

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

9. $4x^2 + 28x + 40$

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

10. $-3x^2 - 24x - 48$

$-3(x + 4)(x + 4) = -3(x + 4)^2$

11. $4x^2 + 24x - 64$

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

12. $2x^2 - 98$

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

13. $3x^2 - 36x + 108$

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

14. $-4x^2 - 8x + 12$

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

15. $-4x^2 - 56x - 192$

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

16. $-5x^2 - 30x - 40$

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

17. $2x^2 + 4x - 126$

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

18. $5x^2 + 45x + 100$

$5(x + 4)(x + 5)$

19. $4x^2 + 44x + 96$

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

20. $5x^2 + 55x + 140$

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