# Résolution d'Équations Quadratiques (A)

Calculer les solutions des équations suivantes.

1. $8x^2 + 34x + 8 = 0$

2. $-40x^2 + 47x + 45 = 0$

3. $27x^2 + 57x + 28 = 0$

4. $-18x^2 + 21x + 49 = 0$

5. $-15x^2 - 21x + 18 = 0$

6. $-24x^2 + 62x - 14 = 0$

7. $20x^2 + 64x + 48 = 0$

8. $8x^2 - 71x + 56 = 0$

9. $21x^2 + 22x - 8 = 0$

10. $28x^2 + 59x + 30 = 0$

11. $-42x^2 + 31x - 4 = 0$

12. $5x^2 - 14x - 24 = 0$

# Résolution d'Équations Quadratiques (A) Réponses

Calculer les solutions des équations suivantes.

1. $8x^2 + 34x + 8 = 0$
   $(4x + 1)(2x + 8) = 0$
   $x = -1/4,\ -4$

2. $-40x^2 + 47x + 45 = 0$
   $(5x - 9)(8x + 5) = 0$
   $x = 1\ 4/5,\ -5/8$

3. $27x^2 + 57x + 28 = 0$
   $(9x + 7)(3x + 4) = 0$
   $x = -7/9,\ -1\ 1/3$

4. $-18x^2 + 21x + 49 = 0$
   $-(3x - 7)(6x + 7) = 0$
   $x = 2\ 1/3,\ -1\ 1/6$

5. $-15x^2 - 21x + 18 = 0$
   $(5x - 3)(3x + 6) = 0$
   $x = 3/5,\ -2$

6. $-24x^2 + 62x - 14 = 0$
   $(3x - 7)(8x - 2) = 0$
   $x = 2\ 1/3,\ 1/4$

7. $20x^2 + 64x + 48 = 0$
   $(5x + 6)(4x + 8) = 0$
   $x = -1\ 1/5,\ -2$

8. $8x^2 - 71x + 56 = 0$
   $(8x - 7)(x - 8) = 0$
   $x = 7/8,\ 8$

9. $21x^2 + 22x - 8 = 0$
   $(3x + 4)(7x - 2) = 0$
   $x = -1\ 1/3,\ 2/7$

10. $28x^2 + 59x + 30 = 0$
    $(7x + 6)(4x + 5) = 0$
    $x = -6/7,\ -1\ 1/4$

11. $-42x^2 + 31x - 4 = 0$
    $-(6x - 1)(7x - 4) = 0$
    $x = 1/6,\ 4/7$

12. $5x^2 - 14x - 24 = 0$
    $(x - 4)(5x + 6) = 0$
    $x = 4,\ -1\ 1/5$

# Résolution d'Équations Quadratiques (B)

Calculer les solutions des équations suivantes.

1. $45x^2 - 94x + 48 = 0$
2. $-72x^2 + 17x + 72 = 0$
3. $16x^2 - 42x - 49 = 0$
4. $24x^2 - 42x + 18 = 0$
5. $63x^2 + 37x - 40 = 0$
6. $-8x^2 + 70x - 48 = 0$
7. $-27x^2 - 15x + 8 = 0$
8. $6x^2 + 5x - 21 = 0$
9. $x^2 + 2x - 48 = 0$
10. $30x^2 - 29x - 7 = 0$
11. $9x^2 - 34x + 21 = 0$
12. $81x^2 - 99x + 28 = 0$

# Résolution d'Équations Quadratiques (B) Réponses

Calculer les solutions des équations suivantes.

1. $45x^2 - 94x + 48 = 0$
   $(9x - 8)(5x - 6) = 0$
   $x = 8/9,\ 1\ 1/5$

2. $-72x^2 + 17x + 72 = 0$
   $(8x - 9)(9x + 8) = 0$
   $x = 1\ 1/8,\ -8/9$

3. $16x^2 - 42x - 49 = 0$
   $(2x - 7)(8x + 7) = 0$
   $x = 3\ 1/2,\ -7/8$

4. $24x^2 - 42x + 18 = 0$
   $(6x - 6)(4x - 3) = 0$
   $x = 1,\ 3/4$

5. $63x^2 + 37x - 40 = 0$
   $(7x + 8)(9x - 5) = 0$
   $x = -1\ 1/7,\ 5/9$

6. $-8x^2 + 70x - 48 = 0$
   $(8x - 6)(x - 8) = 0$
   $x = 3/4,\ 8$

7. $-27x^2 - 15x + 8 = 0$
   $-(9x + 8)(3x - 1) = 0$
   $x = -8/9,\ 1/3$

8. $6x^2 + 5x - 21 = 0$
   $(3x + 7)(2x - 3) = 0$
   $x = -2\ 1/3,\ 1\ 1/2$

9. $x^2 + 2x - 48 = 0$
   $(x - 6)(x + 8) = 0$
   $x = 6,\ -8$

10. $30x^2 - 29x - 7 = 0$
    $(5x + 1)(6x - 7) = 0$
    $x = -1/5,\ 1\ 1/6$

11. $9x^2 - 34x + 21 = 0$
    $(x - 3)(9x - 7) = 0$
    $x = 3,\ 7/9$

12. $81x^2 - 99x + 28 = 0$
    $(9x - 7)(9x - 4) = 0$
    $x = 7/9,\ 4/9$

# Résolution d'Équations Quadratiques (C)

Calculer les solutions des équations suivantes.

1. $-12x^2 - 3x + 9 = 0$

2. $-5x^2 + 49x - 36 = 0$

3. $25x^2 + 30x - 7 = 0$

4. $2x^2 - 6x - 20 = 0$

5. $21x^2 - 15x - 54 = 0$

6. $42x^2 + 70x + 28 = 0$

7. $-54x^2 - 84x - 30 = 0$

8. $30x^2 - 94x + 72 = 0$

9. $-28x^2 - 19x + 20 = 0$

10. $4x^2 - 40x + 64 = 0$

11. $40x^2 + 2x - 2 = 0$

12. $-9x^2 - 3x + 20 = 0$

# Résolution d'Équations Quadratiques (C) Réponses

Calculer les solutions des équations suivantes.

1. $-12x^2 - 3x + 9 = 0$
   $-(4x - 3)(3x + 3) = 0$
   $x = 3/4,\ -1$

2. $-5x^2 + 49x - 36 = 0$
   $(x - 9)(5x - 4) = 0$
   $x = 9\ ,\ 4/5$

3. $25x^2 + 30x - 7 = 0$
   $(5x + 7)(5x - 1) = 0$
   $x = -1\ 2/5,\ 1/5$

4. $2x^2 - 6x - 20 = 0$
   $(2x + 4)(x - 5) = 0$
   $x = -2\ ,\ 5$

5. $21x^2 - 15x - 54 = 0$
   $(7x + 9)(3x - 6) = 0$
   $x = -1\ 2/7,\ 2$

6. $42x^2 + 70x + 28 = 0$
   $(7x + 7)(6x + 4) = 0$
   $x = -1\ ,\ -2/3$

7. $-54x^2 - 84x - 30 = 0$
   $-(6x + 6)(9x + 5) = 0$
   $x = -1\ ,\ -5/9$

8. $30x^2 - 94x + 72 = 0$
   $(5x - 9)(6x - 8) = 0$
   $x = 1\ 4/5,\ 1\ 1/3$

9. $-28x^2 - 19x + 20 = 0$
   $-(7x - 4)(4x + 5) = 0$
   $x = 4/7,\ -1\ 1/4$

10. $4x^2 - 40x + 64 = 0$
    $(4x - 8)(x - 8) = 0$
    $x = 2\ ,\ 8$

11. $40x^2 + 2x - 2 = 0$
    $(8x + 2)(5x - 1) = 0$
    $x = -1/4,\ 1/5$

12. $-9x^2 - 3x + 20 = 0$
    $-(3x + 5)(3x - 4) = 0$
    $x = -1\ 2/3,\ 1\ 1/3$

# Résolution d'Équations Quadratiques (D)

Calculer les solutions des équations suivantes.

1. $16x^2 - 58x + 7 = 0$
2. $-28x^2 + 20x + 8 = 0$
3. $-6x^2 - 30x - 36 = 0$
4. $-18x^2 + 27x + 81 = 0$
5. $63x^2 + 61x + 6 = 0$
6. $-4x^2 - 10x + 36 = 0$
7. $-6x^2 + 35x - 25 = 0$
8. $63x^2 - 29x - 4 = 0$
9. $-12x^2 - 46x - 42 = 0$
10. $-7x^2 - 5x + 2 = 0$
11. $42x^2 + 27x + 3 = 0$
12. $9x^2 + 21x + 6 = 0$

# Résolution d'Équations Quadratiques (D) Réponses

Calculer les solutions des équations suivantes.

1. $16x^2 - 58x + 7 = 0$
   $(2x - 7)(8x - 1) = 0$
   $x = 3\ 1/2,\quad 1/8$

2. $-28x^2 + 20x + 8 = 0$
   $(4x - 4)(7x + 2) = 0$
   $x = 1\ ,\quad -2/7$

3. $-6x^2 - 30x - 36 = 0$
   $(3x + 6)(2x + 6) = 0$
   $x = -2\ ,\quad -3$

4. $-18x^2 + 27x + 81 = 0$
   $-(3x - 9)(6x + 9) = 0$
   $x = 3\ ,\quad -1\ 1/2$

5. $63x^2 + 61x + 6 = 0$
   $(9x + 1)(7x + 6) = 0$
   $x = -1/9,\quad -6/7$

6. $-4x^2 - 10x + 36 = 0$
   $(2x + 9)(2x - 4) = 0$
   $x = -4\ 1/2,\quad 2$

7. $-6x^2 + 35x - 25 = 0$
   $-(6x - 5)(x - 5) = 0$
   $x = 5/6,\quad 5$

8. $63x^2 - 29x - 4 = 0$
   $(9x + 1)(7x - 4) = 0$
   $x = -1/9,\quad 4/7$

9. $-12x^2 - 46x - 42 = 0$
   $-(3x + 7)(4x + 6) = 0$
   $x = -2\ 1/3,\quad -1\ 1/2$

10. $-7x^2 - 5x + 2 = 0$
    $-(x + 1)(7x - 2) = 0$
    $x = -1\ ,\quad 2/7$

11. $42x^2 + 27x + 3 = 0$
    $(6x + 3)(7x + 1) = 0$
    $x = -1/2,\quad -1/7$

12. $9x^2 + 21x + 6 = 0$
    $(3x + 6)(3x + 1) = 0$
    $x = -2\ ,\quad -1/3$

# Résolution d'Équations Quadratiques (E)

Calculer les solutions des équations suivantes.

1. $-40x^2 + 62x - 24 = 0$
2. $-8x^2 + 57x - 7 = 0$
3. $-18x^2 - 15x + 3 = 0$
4. $2x^2 + 18x + 28 = 0$
5. $20x^2 + 15x - 5 = 0$
6. $-20x^2 - 18x - 4 = 0$
7. $-40x^2 - 72x - 32 = 0$
8. $72x^2 - 29x - 10 = 0$
9. $-45x^2 - x + 2 = 0$
10. $42x^2 - 53x + 15 = 0$
11. $-6x^2 + 16x - 10 = 0$
12. $-21x^2 + 72x - 27 = 0$

# Résolution d'Équations Quadratiques (E) Réponses

Calculer les solutions des équations suivantes.

1. $-40x^2 + 62x - 24 = 0$
   $-(5x - 4)(8x - 6) = 0$
   $x = 4/5, \quad 3/4$

2. $-8x^2 + 57x - 7 = 0$
   $(x - 7)(8x - 1) = 0$
   $x = 7, \quad 1/8$

3. $-18x^2 - 15x + 3 = 0$
   $(6x - 1)(3x + 3) = 0$
   $x = 1/6, \quad -1$

4. $2x^2 + 18x + 28 = 0$
   $(2x + 4)(x + 7) = 0$
   $x = -2, \quad -7$

5. $20x^2 + 15x - 5 = 0$
   $(4x - 1)(5x + 5) = 0$
   $x = 1/4, \quad -1$

6. $-20x^2 - 18x - 4 = 0$
   $(5x + 2)(4x + 2) = 0$
   $x = -2/5, \quad -1/2$

7. $-40x^2 - 72x - 32 = 0$
   $-(5x + 4)(8x + 8) = 0$
   $x = -4/5, \quad -1$

8. $72x^2 - 29x - 10 = 0$
   $(9x + 2)(8x - 5) = 0$
   $x = -2/9, \quad 5/8$

9. $-45x^2 - x + 2 = 0$
   $-(5x - 1)(9x + 2) = 0$
   $x = 1/5, \quad -2/9$

10. $42x^2 - 53x + 15 = 0$
    $(6x - 5)(7x - 3) = 0$
    $x = 5/6, \quad 3/7$

11. $-6x^2 + 16x - 10 = 0$
    $-(3x - 5)(2x - 2) = 0$
    $x = 1\ 2/3, \quad 1$

12. $-21x^2 + 72x - 27 = 0$
    $-(3x - 9)(7x - 3) = 0$
    $x = 3, \quad 3/7$

# Résolution d'Équations Quadratiques (F)

Calculer les solutions des équations suivantes.

1. $40x^2 - 25x - 15 = 0$
2. $10x^2 - 24x + 14 = 0$
3. $54x^2 + 96x + 42 = 0$
4. $48x^2 + 20x - 8 = 0$
5. $15x^2 + 11x + 2 = 0$
6. $15x^2 + 26x - 21 = 0$
7. $8x^2 + 30x + 18 = 0$
8. $30x^2 - 19x - 4 = 0$
9. $63x^2 - 23x + 2 = 0$
10. $6x^2 - 13x - 8 = 0$
11. $20x^2 + 11x - 3 = 0$
12. $-35x^2 + 26x + 16 = 0$

# Résolution d'Équations Quadratiques (F) Réponses

Calculer les solutions des équations suivantes.

1. $40x^2 - 25x - 15 = 0$
   $(5x - 5)(8x + 3) = 0$
   $x = 1\ ,\ -3/8$

2. $10x^2 - 24x + 14 = 0$
   $(2x - 2)(5x - 7) = 0$
   $x = 1\ ,\ 1\ 2/5$

3. $54x^2 + 96x + 42 = 0$
   $(6x + 6)(9x + 7) = 0$
   $x = -1\ ,\ -7/9$

4. $48x^2 + 20x - 8 = 0$
   $(8x - 2)(6x + 4) = 0$
   $x = 1/4,\ -2/3$

5. $15x^2 + 11x + 2 = 0$
   $(3x + 1)(5x + 2) = 0$
   $x = -1/3,\ -2/5$

6. $15x^2 + 26x - 21 = 0$
   $(5x - 3)(3x + 7) = 0$
   $x = 3/5,\ -2\ 1/3$

7. $8x^2 + 30x + 18 = 0$
   $(2x + 6)(4x + 3) = 0$
   $x = -3\ ,\ -3/4$

8. $30x^2 - 19x - 4 = 0$
   $(6x + 1)(5x - 4) = 0$
   $x = -1/6,\ 4/5$

9. $63x^2 - 23x + 2 = 0$
   $(9x - 2)(7x - 1) = 0$
   $x = 2/9,\ 1/7$

10. $6x^2 - 13x - 8 = 0$
    $(2x + 1)(3x - 8) = 0$
    $x = -1/2,\ 2\ 2/3$

11. $20x^2 + 11x - 3 = 0$
    $(5x - 1)(4x + 3) = 0$
    $x = 1/5,\ -3/4$

12. $-35x^2 + 26x + 16 = 0$
    $-(5x + 2)(7x - 8) = 0$
    $x = -2/5,\ 1\ 1/7$

# Résolution d'Équations Quadratiques (G)

Calculer les solutions des équations suivantes.

1. $6x^2 + 46x - 16 = 0$
2. $-21x^2 + 11x + 2 = 0$
3. $-27x^2 + 60x - 12 = 0$
4. $-18x^2 - 9x + 20 = 0$
5. $4x^2 + x - 18 = 0$
6. $-4x^2 - 26x - 30 = 0$
7. $-4x^2 + 40x - 64 = 0$
8. $-6x^2 + 38x - 40 = 0$
9. $4x^2 + 30x - 16 = 0$
10. $8x^2 - 10x - 12 = 0$
11. $24x^2 - 42x + 18 = 0$
12. $36x^2 - 76x + 8 = 0$

# Résolution d'Équations Quadratiques (G) Réponses

Calculer les solutions des équations suivantes.

1. $6x^2 + 46x - 16 = 0$
   $(x + 8)(6x - 2) = 0$
   $x = -8\ ,\ \ 1/3$

2. $-21x^2 + 11x + 2 = 0$
   $(7x + 1)(3x - 2) = 0$
   $x = -1/7,\ \ 2/3$

3. $-27x^2 + 60x - 12 = 0$
   $(3x - 6)(9x - 2) = 0$
   $x = 2\ ,\ \ 2/9$

4. $-18x^2 - 9x + 20 = 0$
   $-(3x + 4)(6x - 5) = 0$
   $x = -1\ 1/3,\ \ 5/6$

5. $4x^2 + x - 18 = 0$
   $(4x + 9)(x - 2) = 0$
   $x = -2\ 1/4,\ \ 2$

6. $-4x^2 - 26x - 30 = 0$
   $(4x + 6)(x + 5) = 0$
   $x = -1\ 1/2,\ \ -5$

7. $-4x^2 + 40x - 64 = 0$
   $-(4x - 8)(x - 8) = 0$
   $x = 2\ ,\ \ 8$

8. $-6x^2 + 38x - 40 = 0$
   $-(x - 5)(6x - 8) = 0$
   $x = 5\ ,\ \ 1\ 1/3$

9. $4x^2 + 30x - 16 = 0$
   $(4x - 2)(x + 8) = 0$
   $x = 1/2,\ \ -8$

10. $8x^2 - 10x - 12 = 0$
    $(x - 2)(8x + 6) = 0$
    $x = 2\ ,\ \ -3/4$

11. $24x^2 - 42x + 18 = 0$
    $(8x - 6)(3x - 3) = 0$
    $x = 3/4,\ \ 1$

12. $36x^2 - 76x + 8 = 0$
    $(9x - 1)(4x - 8) = 0$
    $x = 1/9,\ \ 2$

# Résolution d'Équations Quadratiques (H)

Calculer les solutions des équations suivantes.

1. $-8x^2 + 26x + 45 = 0$

2. $7x^2 + 26x + 15 = 0$

3. $48x^2 + 90x + 42 = 0$

4. $28x^2 + 22x - 18 = 0$

5. $-42x^2 + 84x - 42 = 0$

6. $64x^2 + 88x + 18 = 0$

7. $-25x^2 - 10x + 24 = 0$

8. $-35x^2 - 83x - 36 = 0$

9. $-36x^2 - 88x - 32 = 0$

10. $2x^2 - 17x + 35 = 0$

11. $-54x^2 - 9x + 9 = 0$

12. $5x^2 - 16x + 3 = 0$

# Résolution d'Équations Quadratiques (H) Réponses

Calculer les solutions des équations suivantes.

1. $-8x^2 + 26x + 45 = 0$
   $-(4x + 5)(2x - 9) = 0$
   $x = -1\ 1/4,\ \ 4\ 1/2$

2. $7x^2 + 26x + 15 = 0$
   $(7x + 5)(x + 3) = 0$
   $x = -\ 5/7,\ \ -3$

3. $48x^2 + 90x + 42 = 0$
   $(6x + 6)(8x + 7) = 0$
   $x = -1\ ,\ \ -\ 7/8$

4. $28x^2 + 22x - 18 = 0$
   $(4x - 2)(7x + 9) = 0$
   $x = \ 1/2,\ \ -1\ 2/7$

5. $-42x^2 + 84x - 42 = 0$
   $(7x - 7)(6x - 6) = 0$
   $x = 1$

6. $64x^2 + 88x + 18 = 0$
   $(8x + 2)(8x + 9) = 0$
   $x = -\ 1/4,\ \ -1\ 1/8$

7. $-25x^2 - 10x + 24 = 0$
   $-(5x - 4)(5x + 6) = 0$
   $x = \ 4/5,\ \ -1\ 1/5$

8. $-35x^2 - 83x - 36 = 0$
   $-(5x + 9)(7x + 4) = 0$
   $x = -1\ 4/5,\ \ -\ 4/7$

9. $-36x^2 - 88x - 32 = 0$
   $-(4x + 8)(9x + 4) = 0$
   $x = -2\ ,\ \ -\ 4/9$

10. $2x^2 - 17x + 35 = 0$
    $(2x - 7)(x - 5) = 0$
    $x = 3\ 1/2,\ \ 5$

11. $-54x^2 - 9x + 9 = 0$
    $-(9x - 3)(6x + 3) = 0$
    $x = \ 1/3,\ \ -\ 1/2$

12. $5x^2 - 16x + 3 = 0$
    $(5x - 1)(x - 3) = 0$
    $x = \ 1/5,\ \ 3$

# Résolution d'Équations Quadratiques (I)

Calculer les solutions des équations suivantes.

1. $6x^2 + 4x - 2 = 0$
2. $72x^2 + 102x + 36 = 0$
3. $-10x^2 + 21x + 49 = 0$
4. $-54x^2 + 24x + 30 = 0$
5. $-6x^2 + 57x - 27 = 0$
6. $-6x^2 + 47x + 8 = 0$
7. $3x^2 + 20x - 7 = 0$
8. $16x^2 + 18x - 9 = 0$
9. $-18x^2 + 4x + 14 = 0$
10. $-24x^2 + 26x + 8 = 0$
11. $-63x^2 + 71x - 20 = 0$
12. $-6x^2 - 13x + 63 = 0$

# Résolution d'Équations Quadratiques (I) Réponses

Calculer les solutions des équations suivantes.

1. $6x^2 + 4x - 2 = 0$
   $(x + 1)(6x - 2) = 0$
   $x = -1 \ , \ 1/3$

2. $72x^2 + 102x + 36 = 0$
   $(9x + 6)(8x + 6) = 0$
   $x = -2/3, \ -3/4$

3. $-10x^2 + 21x + 49 = 0$
   $(2x - 7)(5x + 7) = 0$
   $x = 3\ 1/2, \ -1\ 2/5$

4. $-54x^2 + 24x + 30 = 0$
   $-(9x + 5)(6x - 6) = 0$
   $x = -5/9, \ 1$

5. $-6x^2 + 57x - 27 = 0$
   $(x - 9)(6x - 3) = 0$
   $x = 9 \ , \ 1/2$

6. $-6x^2 + 47x + 8 = 0$
   $(6x + 1)(x - 8) = 0$
   $x = -1/6, \ 8$

7. $3x^2 + 20x - 7 = 0$
   $(x + 7)(3x - 1) = 0$
   $x = -7 \ , \ 1/3$

8. $16x^2 + 18x - 9 = 0$
   $(8x - 3)(2x + 3) = 0$
   $x = 3/8, \ -1\ 1/2$

9. $-18x^2 + 4x + 14 = 0$
   $-(2x - 2)(9x + 7) = 0$
   $x = 1 \ , \ -7/9$

10. $-24x^2 + 26x + 8 = 0$
    $-(4x + 1)(6x - 8) = 0$
    $x = -1/4, \ 1\ 1/3$

11. $-63x^2 + 71x - 20 = 0$
    $-(9x - 5)(7x - 4) = 0$
    $x = 5/9, \ 4/7$

12. $-6x^2 - 13x + 63 = 0$
    $-(3x - 7)(2x + 9) = 0$
    $x = 2\ 1/3, \ -4\ 1/2$

# Résolution d'Équations Quadratiques (J)

Calculer les solutions des équations suivantes.

1. $2x^2 + 16x + 30 = 0$
2. $6x^2 + 10x - 4 = 0$
3. $-72x^2 - 31x + 28 = 0$
4. $14x^2 + 59x + 35 = 0$
5. $-8x^2 - 39x - 28 = 0$
6. $24x^2 - 6x - 63 = 0$
7. $-10x^2 - 6x + 28 = 0$
8. $-7x^2 - 8x + 12 = 0$
9. $15x^2 + 19x - 10 = 0$
10. $-30x^2 - 77x - 49 = 0$
11. $-28x^2 + 33x - 9 = 0$
12. $27x^2 - 51x - 28 = 0$

# Résolution d'Équations Quadratiques (J) Réponses

Calculer les solutions des équations suivantes.

1. $2x^2 + 16x + 30 = 0$
   $(x + 5)(2x + 6) = 0$
   $x = -5\ ,\ -3$

2. $6x^2 + 10x - 4 = 0$
   $(x + 2)(6x - 2) = 0$
   $x = -2\ ,\ 1/3$

3. $-72x^2 - 31x + 28 = 0$
   $(9x - 4)(8x + 7) = 0$
   $x = 4/9,\ -7/8$

4. $14x^2 + 59x + 35 = 0$
   $(7x + 5)(2x + 7) = 0$
   $x = -5/7,\ -3\ 1/2$

5. $-8x^2 - 39x - 28 = 0$
   $(x + 4)(8x + 7) = 0$
   $x = -4\ ,\ -7/8$

6. $24x^2 - 6x - 63 = 0$
   $(6x + 9)(4x - 7) = 0$
   $x = -1\ 1/2,\ 1\ 3/4$

7. $-10x^2 - 6x + 28 = 0$
   $-(5x - 7)(2x + 4) = 0$
   $x = 1\ 2/5,\ -2$

8. $-7x^2 - 8x + 12 = 0$
   $-(7x - 6)(x + 2) = 0$
   $x = 6/7,\ -2$

9. $15x^2 + 19x - 10 = 0$
   $(3x + 5)(5x - 2) = 0$
   $x = -1\ 2/3,\ 2/5$

10. $-30x^2 - 77x - 49 = 0$
    $-(6x + 7)(5x + 7) = 0$
    $x = -1\ 1/6,\ -1\ 2/5$

11. $-28x^2 + 33x - 9 = 0$
    $-(4x - 3)(7x - 3) = 0$
    $x = 3/4,\ 3/7$

12. $27x^2 - 51x - 28 = 0$
    $(9x + 4)(3x - 7) = 0$
    $x = -4/9,\ 2\ 1/3$