

Résolution d'Équations Quadratiques (A)

Calculer les solutions des équations suivantes.

1. $81x^2 + 18x - 8 = 0$

7. $25x^2 - 5x - 2 = 0$

2. $81x^2 - 45x - 24 = 0$

8. $56x^2 - 72x + 16 = 0$

3. $18x^2 + 18x - 36 = 0$

9. $24x^2 + 10x - 25 = 0$

4. $24x^2 + 52x + 8 = 0$

10. $35x^2 - 87x + 54 = 0$

5. $28x^2 + 2x - 6 = 0$

11. $72x^2 + 101x + 35 = 0$

6. $40x^2 - 53x + 9 = 0$

12. $48x^2 + 42x + 9 = 0$

Résolution d'Équations Quadratiques (A) Réponses

Calculer les solutions des équations suivantes.

1. $81x^2 + 18x - 8 = 0$
 $(9x + 4)(9x - 2) = 0$
 $x = -4/9, 2/9$

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

2. $81x^2 - 45x - 24 = 0$
 $(9x - 8)(9x + 3) = 0$
 $x = 8/9, -1/3$

8. $56x^2 - 72x + 16 = 0$
 $(7x - 2)(8x - 8) = 0$
 $x = 2/7, 1$

3. $18x^2 + 18x - 36 = 0$
 $(3x + 6)(6x - 6) = 0$
 $x = -2, 1$

9. $24x^2 + 10x - 25 = 0$
 $(4x + 5)(6x - 5) = 0$
 $x = -1\ 1/4, 5/6$

4. $24x^2 + 52x + 8 = 0$
 $(4x + 8)(6x + 1) = 0$
 $x = -2, -1/6$

10. $35x^2 - 87x + 54 = 0$
 $(5x - 6)(7x - 9) = 0$
 $x = 1\ 1/5, 1\ 2/7$

5. $28x^2 + 2x - 6 = 0$
 $(4x + 2)(7x - 3) = 0$
 $x = -1/2, 3/7$

11. $72x^2 + 101x + 35 = 0$
 $(8x + 5)(9x + 7) = 0$
 $x = -5/8, -7/9$

6. $40x^2 - 53x + 9 = 0$
 $(5x - 1)(8x - 9) = 0$
 $x = 1/5, 1\ 1/8$

12. $48x^2 + 42x + 9 = 0$
 $(8x + 3)(6x + 3) = 0$
 $x = -3/8, -1/2$

Résolution d'Équations Quadratiques (B)

Calculer les solutions des équations suivantes.

1. $5x^2 - 16x - 16 = 0$

7. $18x^2 + 23x + 7 = 0$

2. $64x^2 - 112x + 45 = 0$

8. $28x^2 - 45x + 18 = 0$

3. $54x^2 + 72x + 24 = 0$

9. $63x^2 + 53x - 36 = 0$

4. $25x^2 + 40x + 7 = 0$

10. $28x^2 + 16x - 12 = 0$

5. $8x^2 + 13x - 6 = 0$

11. $7x^2 - 65x + 18 = 0$

6. $81x^2 - 72x + 12 = 0$

12. $40x^2 + 3x - 1 = 0$

Résolution d'Équations Quadratiques (B) Réponses

Calculer les solutions des équations suivantes.

1. $5x^2 - 16x - 16 = 0$
 $(x - 4)(5x + 4) = 0$
 $x = 4, -4/5$

7. $18x^2 + 23x + 7 = 0$
 $(2x + 1)(9x + 7) = 0$
 $x = -1/2, -7/9$

2. $64x^2 - 112x + 45 = 0$
 $(8x - 9)(8x - 5) = 0$
 $x = 1\ 1/8, 5/8$

8. $28x^2 - 45x + 18 = 0$
 $(4x - 3)(7x - 6) = 0$
 $x = 3/4, 6/7$

3. $54x^2 + 72x + 24 = 0$
 $(9x + 6)(6x + 4) = 0$
 $x = -2/3$

9. $63x^2 + 53x - 36 = 0$
 $(7x + 9)(9x - 4) = 0$
 $x = -1\ 2/7, 4/9$

4. $25x^2 + 40x + 7 = 0$
 $(5x + 1)(5x + 7) = 0$
 $x = -1/5, -1\ 2/5$

10. $28x^2 + 16x - 12 = 0$
 $(4x + 4)(7x - 3) = 0$
 $x = -1, 3/7$

5. $8x^2 + 13x - 6 = 0$
 $(x + 2)(8x - 3) = 0$
 $x = -2, 3/8$

11. $7x^2 - 65x + 18 = 0$
 $(x - 9)(7x - 2) = 0$
 $x = 9, 2/7$

6. $81x^2 - 72x + 12 = 0$
 $(9x - 2)(9x - 6) = 0$
 $x = 2/9, 2/3$

12. $40x^2 + 3x - 1 = 0$
 $(8x - 1)(5x + 1) = 0$
 $x = 1/8, -1/5$

Résolution d'Équations Quadratiques (C)

Calculer les solutions des équations suivantes.

1. $16x^2 - 32x + 15 = 0$

7. $48x^2 - 16x - 32 = 0$

2. $36x^2 + 108x + 72 = 0$

8. $42x^2 - 58x + 20 = 0$

3. $14x^2 + 29x - 15 = 0$

9. $35x^2 - 33x - 8 = 0$

4. $24x^2 - 64x + 42 = 0$

10. $24x^2 + 71x + 35 = 0$

5. $30x^2 - 34x - 8 = 0$

11. $27x^2 - 21x + 2 = 0$

6. $12x^2 - 44x - 16 = 0$

12. $24x^2 + 49x + 15 = 0$

Résolution d'Équations Quadratiques (C) Réponses

Calculer les solutions des équations suivantes.

1. $16x^2 - 32x + 15 = 0$
 $(4x - 5)(4x - 3) = 0$
 $x = 1 \frac{1}{4}, \frac{3}{4}$

7. $48x^2 - 16x - 32 = 0$
 $(6x + 4)(8x - 8) = 0$
 $x = -\frac{2}{3}, 1$

2. $36x^2 + 108x + 72 = 0$
 $(9x + 9)(4x + 8) = 0$
 $x = -1, -2$

8. $42x^2 - 58x + 20 = 0$
 $(7x - 5)(6x - 4) = 0$
 $x = \frac{5}{7}, \frac{2}{3}$

3. $14x^2 + 29x - 15 = 0$
 $(2x + 5)(7x - 3) = 0$
 $x = -2 \frac{1}{2}, \frac{3}{7}$

9. $35x^2 - 33x - 8 = 0$
 $(5x + 1)(7x - 8) = 0$
 $x = -\frac{1}{5}, 1 \frac{1}{7}$

4. $24x^2 - 64x + 42 = 0$
 $(6x - 7)(4x - 6) = 0$
 $x = 1 \frac{1}{6}, 1 \frac{1}{2}$

10. $24x^2 + 71x + 35 = 0$
 $(8x + 5)(3x + 7) = 0$
 $x = -\frac{5}{8}, -2 \frac{1}{3}$

5. $30x^2 - 34x - 8 = 0$
 $(6x - 8)(5x + 1) = 0$
 $x = 1 \frac{1}{3}, -\frac{1}{5}$

11. $27x^2 - 21x + 2 = 0$
 $(9x - 1)(3x - 2) = 0$
 $x = \frac{1}{9}, \frac{2}{3}$

6. $12x^2 - 44x - 16 = 0$
 $(6x + 2)(2x - 8) = 0$
 $x = -\frac{1}{3}, 4$

12. $24x^2 + 49x + 15 = 0$
 $(8x + 3)(3x + 5) = 0$
 $x = -\frac{3}{8}, -1 \frac{2}{3}$

Résolution d'Équations Quadratiques (D)

Calculer les solutions des équations suivantes.

1. $27x^2 - 72x + 45 = 0$

7. $5x^2 + 7x - 24 = 0$

2. $4x^2 + 4x - 24 = 0$

8. $28x^2 - 26x - 24 = 0$

3. $64x^2 - 24x - 54 = 0$

9. $24x^2 + 2x - 2 = 0$

4. $8x^2 + 8x - 16 = 0$

10. $63x^2 + 11x - 2 = 0$

5. $24x^2 + 52x + 24 = 0$

11. $30x^2 - 99x + 81 = 0$

6. $16x^2 + 60x + 54 = 0$

12. $24x^2 + 88x + 64 = 0$

Résolution d'Équations Quadratiques (D) Réponses

Calculer les solutions des équations suivantes.

1. $27x^2 - 72x + 45 = 0$
 $(9x - 9)(3x - 5) = 0$
 $x = 1, 1 \frac{2}{3}$

7. $5x^2 + 7x - 24 = 0$
 $(5x - 8)(x + 3) = 0$
 $x = 1 \frac{3}{5}, -3$

2. $4x^2 + 4x - 24 = 0$
 $(4x - 8)(x + 3) = 0$
 $x = 2, -3$

8. $28x^2 - 26x - 24 = 0$
 $(7x + 4)(4x - 6) = 0$
 $x = -\frac{4}{7}, 1 \frac{1}{2}$

3. $64x^2 - 24x - 54 = 0$
 $(8x + 6)(8x - 9) = 0$
 $x = -\frac{3}{4}, 1 \frac{1}{8}$

9. $24x^2 + 2x - 2 = 0$
 $(8x - 2)(3x + 1) = 0$
 $x = \frac{1}{4}, -\frac{1}{3}$

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

10. $63x^2 + 11x - 2 = 0$
 $(7x + 2)(9x - 1) = 0$
 $x = -\frac{2}{7}, \frac{1}{9}$

5. $24x^2 + 52x + 24 = 0$
 $(6x + 4)(4x + 6) = 0$
 $x = -\frac{2}{3}, -1 \frac{1}{2}$

11. $30x^2 - 99x + 81 = 0$
 $(6x - 9)(5x - 9) = 0$
 $x = 1 \frac{1}{2}, 1 \frac{4}{5}$

6. $16x^2 + 60x + 54 = 0$
 $(4x + 9)(4x + 6) = 0$
 $x = -2 \frac{1}{4}, -1 \frac{1}{2}$

12. $24x^2 + 88x + 64 = 0$
 $(3x + 8)(8x + 8) = 0$
 $x = -2 \frac{2}{3}, -1$

Résolution d'Équations Quadratiques (E)

Calculer les solutions des équations suivantes.

1. $54x^2 + 24x + 2 = 0$

7. $6x^2 + 33x - 63 = 0$

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

8. $12x^2 - 50x + 28 = 0$

3. $24x^2 + 43x + 5 = 0$

9. $63x^2 + 28x - 35 = 0$

4. $15x^2 + 30x - 45 = 0$

10. $15x^2 + 38x + 24 = 0$

5. $45x^2 - 10x - 35 = 0$

11. $10x^2 + 12x + 2 = 0$

6. $15x^2 - 27x - 54 = 0$

12. $2x^2 - 7x - 30 = 0$

Résolution d'Équations Quadratiques (E) Réponses

Calculer les solutions des équations suivantes.

1. $54x^2 + 24x + 2 = 0$
 $(6x + 2)(9x + 1) = 0$
 $x = -1/3, -1/9$

7. $6x^2 + 33x - 63 = 0$
 $(6x - 9)(x + 7) = 0$
 $x = 1\ 1/2, -7$

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

8. $12x^2 - 50x + 28 = 0$
 $(2x - 7)(6x - 4) = 0$
 $x = 3\ 1/2, 2/3$

3. $24x^2 + 43x + 5 = 0$
 $(3x + 5)(8x + 1) = 0$
 $x = -1\ 2/3, -1/8$

9. $63x^2 + 28x - 35 = 0$
 $(7x + 7)(9x - 5) = 0$
 $x = -1, 5/9$

4. $15x^2 + 30x - 45 = 0$
 $(3x + 9)(5x - 5) = 0$
 $x = -3, 1$

10. $15x^2 + 38x + 24 = 0$
 $(3x + 4)(5x + 6) = 0$
 $x = -1\ 1/3, -1\ 1/5$

5. $45x^2 - 10x - 35 = 0$
 $(5x - 5)(9x + 7) = 0$
 $x = 1, -7/9$

11. $10x^2 + 12x + 2 = 0$
 $(2x + 2)(5x + 1) = 0$
 $x = -1, -1/5$

6. $15x^2 - 27x - 54 = 0$
 $(5x + 6)(3x - 9) = 0$
 $x = -1\ 1/5, 3$

12. $2x^2 - 7x - 30 = 0$
 $(x - 6)(2x + 5) = 0$
 $x = 6, -2\ 1/2$

Résolution d'Équations Quadratiques (F)

Calculer les solutions des équations suivantes.

1. $8x^2 - 9x - 14 = 0$

7. $18x^2 - 40x + 8 = 0$

2. $81x^2 - 36x - 45 = 0$

8. $x^2 + 3x - 54 = 0$

3. $8x^2 + 14x - 4 = 0$

9. $24x^2 - 38x - 7 = 0$

4. $32x^2 + 8x - 4 = 0$

10. $4x^2 - 26x + 40 = 0$

5. $56x^2 + 79x + 18 = 0$

11. $42x^2 - 86x + 40 = 0$

6. $81x^2 - 36x - 5 = 0$

12. $10x^2 + 63x + 81 = 0$

Résolution d'Équations Quadratiques (F) Réponses

Calculer les solutions des équations suivantes.

1. $8x^2 - 9x - 14 = 0$
 $(x - 2)(8x + 7) = 0$
 $x = 2, -7/8$

7. $18x^2 - 40x + 8 = 0$
 $(2x - 4)(9x - 2) = 0$
 $x = 2, 2/9$

2. $81x^2 - 36x - 45 = 0$
 $(9x + 5)(9x - 9) = 0$
 $x = -5/9, 1$

8. $x^2 + 3x - 54 = 0$
 $(x - 6)(x + 9) = 0$
 $x = 6, -9$

3. $8x^2 + 14x - 4 = 0$
 $(2x + 4)(4x - 1) = 0$
 $x = -2, 1/4$

9. $24x^2 - 38x - 7 = 0$
 $(6x + 1)(4x - 7) = 0$
 $x = -1/6, 1\ 3/4$

4. $32x^2 + 8x - 4 = 0$
 $(4x - 1)(8x + 4) = 0$
 $x = 1/4, -1/2$

10. $4x^2 - 26x + 40 = 0$
 $(2x - 5)(2x - 8) = 0$
 $x = 2\ 1/2, 4$

5. $56x^2 + 79x + 18 = 0$
 $(8x + 9)(7x + 2) = 0$
 $x = -1\ 1/8, -2/7$

11. $42x^2 - 86x + 40 = 0$
 $(6x - 8)(7x - 5) = 0$
 $x = 1\ 1/3, 5/7$

6. $81x^2 - 36x - 5 = 0$
 $(9x + 1)(9x - 5) = 0$
 $x = -1/9, 5/9$

12. $10x^2 + 63x + 81 = 0$
 $(2x + 9)(5x + 9) = 0$
 $x = -4\ 1/2, -1\ 4/5$

Résolution d'Équations Quadratiques (G)

Calculer les solutions des équations suivantes.

1. $45x^2 - 55x + 10 = 0$

7. $5x^2 + 38x - 63 = 0$

2. $48x^2 - 32x + 4 = 0$

8. $15x^2 + 64x + 64 = 0$

3. $24x^2 - 78x + 18 = 0$

9. $56x^2 + 5x - 25 = 0$

4. $63x^2 + 130x + 63 = 0$

10. $15x^2 - 19x - 10 = 0$

5. $56x^2 - 86x + 18 = 0$

11. $36x^2 + 6x - 2 = 0$

6. $4x^2 + 24x + 27 = 0$

12. $18x^2 + 39x + 18 = 0$

Résolution d'Équations Quadratiques (G) Réponses

Calculer les solutions des équations suivantes.

1. $45x^2 - 55x + 10 = 0$
 $(5x - 5)(9x - 2) = 0$
 $x = 1, 2/9$

7. $5x^2 + 38x - 63 = 0$
 $(5x - 7)(x + 9) = 0$
 $x = 1\ 2/5, -9$

2. $48x^2 - 32x + 4 = 0$
 $(6x - 1)(8x - 4) = 0$
 $x = 1/6, 1/2$

8. $15x^2 + 64x + 64 = 0$
 $(3x + 8)(5x + 8) = 0$
 $x = -2\ 2/3, -1\ 3/5$

3. $24x^2 - 78x + 18 = 0$
 $(8x - 2)(3x - 9) = 0$
 $x = 1/4, 3$

9. $56x^2 + 5x - 25 = 0$
 $(8x - 5)(7x + 5) = 0$
 $x = 5/8, -5/7$

4. $63x^2 + 130x + 63 = 0$
 $(9x + 7)(7x + 9) = 0$
 $x = -7/9, -1\ 2/7$

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

5. $56x^2 - 86x + 18 = 0$
 $(7x - 9)(8x - 2) = 0$
 $x = 1\ 2/7, 1/4$

11. $36x^2 + 6x - 2 = 0$
 $(6x - 1)(6x + 2) = 0$
 $x = 1/6, -1/3$

6. $4x^2 + 24x + 27 = 0$
 $(2x + 9)(2x + 3) = 0$
 $x = -4\ 1/2, -1\ 1/2$

12. $18x^2 + 39x + 18 = 0$
 $(9x + 6)(2x + 3) = 0$
 $x = -2/3, -1\ 1/2$

Résolution d'Équations Quadratiques (H)

Calculer les solutions des équations suivantes.

1. $49x^2 - 28x - 21 = 0$

7. $6x^2 - 26x + 8 = 0$

2. $36x^2 + 100x + 56 = 0$

8. $48x^2 + 4x - 4 = 0$

3. $35x^2 - 89x + 56 = 0$

9. $2x^2 + 4x - 48 = 0$

4. $54x^2 + 99x + 45 = 0$

10. $45x^2 + 18x - 63 = 0$

5. $24x^2 - 18x - 81 = 0$

11. $10x^2 - 7x - 6 = 0$

6. $42x^2 - 38x - 24 = 0$

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

Résolution d'Équations Quadratiques (H) Réponses

Calculer les solutions des équations suivantes.

1. $49x^2 - 28x - 21 = 0$
 $(7x + 3)(7x - 7) = 0$
 $x = -3/7, 1$

7. $6x^2 - 26x + 8 = 0$
 $(3x - 1)(2x - 8) = 0$
 $x = 1/3, 4$

2. $36x^2 + 100x + 56 = 0$
 $(9x + 7)(4x + 8) = 0$
 $x = -7/9, -2$

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

3. $35x^2 - 89x + 56 = 0$
 $(7x - 8)(5x - 7) = 0$
 $x = 1\ 1/7, 1\ 2/5$

9. $2x^2 + 4x - 48 = 0$
 $(2x - 8)(x + 6) = 0$
 $x = 4, -6$

4. $54x^2 + 99x + 45 = 0$
 $(6x + 5)(9x + 9) = 0$
 $x = -5/6, -1$

10. $45x^2 + 18x - 63 = 0$
 $(5x + 7)(9x - 9) = 0$
 $x = -1\ 2/5, 1$

5. $24x^2 - 18x - 81 = 0$
 $(6x + 9)(4x - 9) = 0$
 $x = -1\ 1/2, 2\ 1/4$

11. $10x^2 - 7x - 6 = 0$
 $(2x + 1)(5x - 6) = 0$
 $x = -1/2, 1\ 1/5$

6. $42x^2 - 38x - 24 = 0$
 $(7x + 3)(6x - 8) = 0$
 $x = -3/7, 1\ 1/3$

12. $14x^2 - 14 = 0$
 $(7x + 7)(2x - 2) = 0$
 $x = -1, 1$

Résolution d'Équations Quadratiques (I)

Calculer les solutions des équations suivantes.

1. $63x^2 - 69x + 18 = 0$

7. $2x^2 - 16x - 18 = 0$

2. $20x^2 + 31x - 9 = 0$

8. $32x^2 + 68x + 36 = 0$

3. $32x^2 + 8x - 12 = 0$

9. $6x^2 - 10x - 4 = 0$

4. $10x^2 - 43x - 9 = 0$

10. $12x^2 - 32x + 16 = 0$

5. $54x^2 + 30x - 4 = 0$

11. $x^2 - 11x + 18 = 0$

6. $14x^2 + 29x + 12 = 0$

12. $54x^2 + 129x + 72 = 0$

Résolution d'Équations Quadratiques (I) Réponses

Calculer les solutions des équations suivantes.

1. $63x^2 - 69x + 18 = 0$
 $(9x - 6)(7x - 3) = 0$
 $x = 2/3, 3/7$

7. $2x^2 - 16x - 18 = 0$
 $(2x + 2)(x - 9) = 0$
 $x = -1, 9$

2. $20x^2 + 31x - 9 = 0$
 $(4x - 1)(5x + 9) = 0$
 $x = 1/4, -1\ 4/5$

8. $32x^2 + 68x + 36 = 0$
 $(8x + 9)(4x + 4) = 0$
 $x = -1\ 1/8, -1$

3. $32x^2 + 8x - 12 = 0$
 $(4x + 3)(8x - 4) = 0$
 $x = -3/4, 1/2$

9. $6x^2 - 10x - 4 = 0$
 $(6x + 2)(x - 2) = 0$
 $x = -1/3, 2$

4. $10x^2 - 43x - 9 = 0$
 $(5x + 1)(2x - 9) = 0$
 $x = -1/5, 4\ 1/2$

10. $12x^2 - 32x + 16 = 0$
 $(4x - 8)(3x - 2) = 0$
 $x = 2, 2/3$

5. $54x^2 + 30x - 4 = 0$
 $(9x - 1)(6x + 4) = 0$
 $x = 1/9, -2/3$

11. $x^2 - 11x + 18 = 0$
 $(x - 2)(x - 9) = 0$
 $x = 2, 9$

6. $14x^2 + 29x + 12 = 0$
 $(7x + 4)(2x + 3) = 0$
 $x = -4/7, -1\ 1/2$

12. $54x^2 + 129x + 72 = 0$
 $(9x + 8)(6x + 9) = 0$
 $x = -8/9, -1\ 1/2$

Résolution d'Équations Quadratiques (J)

Calculer les solutions des équations suivantes.

1. $8x^2 + 50x + 63 = 0$

7. $14x^2 + 17x + 5 = 0$

2. $36x^2 - 11x - 5 = 0$

8. $40x^2 + 46x + 12 = 0$

3. $72x^2 + 73x - 9 = 0$

9. $14x^2 - 68x + 48 = 0$

4. $32x^2 - 56x - 36 = 0$

10. $14x^2 - x - 3 = 0$

5. $x^2 - 13x + 36 = 0$

11. $45x^2 + 61x + 20 = 0$

6. $63x^2 - 80x + 25 = 0$

12. $54x^2 + 99x + 27 = 0$

Résolution d'Équations Quadratiques (J) Réponses

Calculer les solutions des équations suivantes.

1. $8x^2 + 50x + 63 = 0$
 $(2x + 9)(4x + 7) = 0$
 $x = -4 \frac{1}{2}, -1 \frac{3}{4}$

7. $14x^2 + 17x + 5 = 0$
 $(2x + 1)(7x + 5) = 0$
 $x = -\frac{1}{2}, -\frac{5}{7}$

2. $36x^2 - 11x - 5 = 0$
 $(4x + 1)(9x - 5) = 0$
 $x = -\frac{1}{4}, \frac{5}{9}$

8. $40x^2 + 46x + 12 = 0$
 $(5x + 2)(8x + 6) = 0$
 $x = -\frac{2}{5}, -\frac{3}{4}$

3. $72x^2 + 73x - 9 = 0$
 $(9x - 1)(8x + 9) = 0$
 $x = \frac{1}{9}, -1 \frac{1}{8}$

9. $14x^2 - 68x + 48 = 0$
 $(7x - 6)(2x - 8) = 0$
 $x = \frac{6}{7}, 4$

4. $32x^2 - 56x - 36 = 0$
 $(8x + 4)(4x - 9) = 0$
 $x = -\frac{1}{2}, 2 \frac{1}{4}$

10. $14x^2 - x - 3 = 0$
 $(2x - 1)(7x + 3) = 0$
 $x = \frac{1}{2}, -\frac{3}{7}$

5. $x^2 - 13x + 36 = 0$
 $(x - 9)(x - 4) = 0$
 $x = 9, 4$

11. $45x^2 + 61x + 20 = 0$
 $(5x + 4)(9x + 5) = 0$
 $x = -\frac{4}{5}, -\frac{5}{9}$

6. $63x^2 - 80x + 25 = 0$
 $(9x - 5)(7x - 5) = 0$
 $x = \frac{5}{9}, \frac{5}{7}$

12. $54x^2 + 99x + 27 = 0$
 $(6x + 9)(9x + 3) = 0$
 $x = -1 \frac{1}{2}, -\frac{1}{3}$