

ДОМАШНА РАБОТА №2

1) Решете уравнението:

1.1. $x^2 + 6x + 5 = 0$;

1.2. $x^2 - 5x + 6 = 0$;

1.3. $x^2 - 6x - 7 = 0$;

1.4. $x^2 - 2x - 8 = 0$;

1.5. $x^2 + 2x - 3 = 0$;

1.6. $x^2 + 6x + 8 = 0$;

1.7. $x^2 + x - 6 = 0$;

1.8. $x^2 - 6x + 9 = 0$;

1.9. $x^2 - x - 12 = 0$;

1.10. $x^2 + 4x + 4 = 0$.

2) Решете уравнението:

2.1. $x^2 + 2x + 5 = 0$;

2.2. $x^2 + 4x + 13 = 0$;

2.3. $x^2 - 2x + 2 = 0$;

2.4. $x^2 - 6x + 10 = 0$;

2.5. $x^2 + 2x + 10 = 0$;

2.6. $x^2 + 6x + 13 = 0$;

2.7. $x^2 + 4x + 5 = 0$;

2.8. $x^2 - 8x + 17 = 0$;

2.9. $x^2 - 4x + 8 = 0$;

2.10. $x^2 - 2x + 17 = 0$.

3) Решете уравнението:

3.1. $x^2 - 1 = 0$;

3.2. $x^2 + 1 = 0$;

3.3. $x^2 - 4 = 0$;

3.4. $x^2 + 4 = 0$;

3.5. $x^2 - 9 = 0$;

3.6. $x^2 + 9 = 0$;

3.7. $x^2 - 16 = 0$;

3.8. $x^2 + 16 = 0$;

3.9. $x^2 - 3 = 0$;

3.10. $x^2 + 3 = 0$.

4) Решете уравнението и разложете на множители:

4.1. $x^3 + 3x^2 - 6x - 8 = 0$;

4.2. $x^3 + 2x^2 - 5x - 6 = 0$;

4.3. $x^3 + 3x^2 - 4x - 12 = 0$;

4.4. $x^3 + 7x^2 + 14x + 8 = 0$;

4.5. $x^3 + 2x^2 - 9x - 18 = 0$;

4.6. $x^3 + 2x^2 - 9x - 18 = 0$;

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

4.8. $x^3 + x^2 - 4x - 4 = 0$;

4.9. $x^3 - 4x^2 - 3x + 18 = 0$;

4.10. $x^3 - 5x^2 - x + 5 = 0$.

5) Решете уравнението:

5.1. $x^3 + x^2 - 4x + 6 = 0$;

5.2. $x^3 + 5x^2 + 8x + 6 = 0$;

5.3. $x^3 - 2x^2 - 3x + 10 = 0$;

5.4. $x^3 - 5x^2 + 4x + 10 = 0$;

5.5. $x^3 - 3x^2 + 4x - 12 = 0$;

5.6. $x^3 - x^2 - 4x + 24 = 0$;

5.7. $x^3 + 2x^2 + 9x + 18 = 0$;

5.8. $x^3 - 2x^2 + 6x - 12 = 0$;

5.9. $x^3 - 5x^2 + x - 5 = 0$;

5.10. $x^3 + x - 10 = 0$.

6) Решете уравнението и разложете на множители:

6.1. $x^4 + 6x^3 + 5x^2 - 24x - 36 = 0$;

6.2. $x^4 - x^3 - 10x^2 + 4x + 24 = 0$;

6.3. $x^4 - 3x^3 - 7x^2 + 27x - 18 = 0$;

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

6.5. $x^4 + x^3 - 13x^2 - x + 12 = 0$;

6.6. $x^4 + 2x^3 - 15x^2 - 32x - 16 = 0$;

6.7. $x^4 + 2x^3 - 2x - 1 = 0$;

6.8. $x^4 + x^3 - 6x^2 - 4x + 8 = 0$;

6.9. $x^4 - 4x^3 + 16x - 16 = 0$;

6.10. $x^4 + 2x^3 - 8x^2 - 18x - 9 = 0$.

7) Решете уравнението:

7.1. $x^4 + x^3 - 11x^2 + x - 12 = 0$;

7.2. $x^4 + 2x^3 + x^2 - 8x - 20 = 0$;

7.3. $x^4 - 4x^3 + 5x^2 - 4x + 4 = 0$;

7.4. $x^4 - 4x^3 - x^2 + 14x + 10 = 0$;

7.5. $x^4 + 2x^3 + x^2 + 8x - 12 = 0$;

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

7.7. $x^4 + 2x^3 + 10x^2 + 18x + 9 = 0$;

7.8. $x^4 - 2x^3 - 6x^2 + 22x - 15 = 0$;

7.9. $x^4 - 4x^3 + 7x^2 - 16x + 12 = 0$;

7.10. $x^4 + 4x^3 + 7x^2 - 4x - 8 = 0$.

8) Намерете частното и остатъка, получени при делението на полинома $p(x)$ с $q(x)$

8.1. $p(x) = x^4 - 4x^3 + 3x^2 - 5x - 4$; $q(x) = x + 2$;

8.2. $p(x) = 3x^4 + 2x^3 + 6x^2 - 2x + 1$; $q(x) = x + 1$;

8.3. $p(x) = 2x^4 + x^3 - 5x^2 + 2x - 7$; $q(x) = x - 2$;

8.4. $p(x) = x^5 + 2x^4 + 3x^3 - 2x^2 - 5x + 2$; $q(x) = x + 2$;

8.5. $p(x) = x^5 - 3x^4 - 3x^3 + 4x^2 - 6x - 6$; $q(x) = x - 3$;

8.6. $p(x) = x^4 - 6x^3 + 8x^2 - 8$; $q(x) = x - 2$;

8.7. $p(x) = x^4 - 2x^3 + 4x - 5$; $q(x) = x - 1$;

8.8. $p(x) = x^4 + 6x^2 + 4x - 8$; $q(x) = x + 1$;

8.9. $p(x) = x^5 - 2x^3 + 4x^2 - 1$; $q(x) = x - 2$;

8.10. $p(x) = x^5 - x^4 + 2x^3 + 2x^2 - 5$; $q(x) = x - 1$.

9) Намерете частното и остатъка, получени при делението на полинома $p(x)$ с $q(x)$

9.1. $p(x) = x^4 - 6x^3 + 6x^2 + 8x - 5$; $q(x) = x^2 + 1$;

9.2. $p(x) = x^4 - 2x^3 + 2x^2 + 8x - 5$; $q(x) = x^2 + 2$;

9.3. $p(x) = x^5 + 3x^3 + 6x^2 + 9x - 3$; $q(x) = x^2 + 3$;

9.4. $p(x) = x^5 - 2x^3 + 8x^2 - 4x + 3$; $q(x) = x^2 + 2$;

9.5. $p(x) = 3x^4 + 2x^3 - 8x^2 + 6x - 5$; $q(x) = x^2 + x$;

9.6. $p(x) = x^5 + x^4 - 3x^3 + 6x - 6$; $q(x) = x^2 + 2$;

9.7. $p(x) = 3x^4 + 2x^3 + 6x^2 - 6x + 3$; $q(x) = x^2 + 3$;

9.8. $p(x) = x^4 - 6x^2 + 6x + 8$; $q(x) = x^2 + 1$;

9.9. $p(x) = x^5 + 2x^4 - 4x^2 + 8$; $q(x) = x^2 + 2$;

9.10. $p(x) = x^4 + 2x^3 + 6x^2 - 7x - 5$; $q(x) = x^2 - x$.