1 Целые выражения

1.1 Разложение на множители

[664] $x^2 + xy - xz - yz$?

[665] $y - y^2 - y^3 + y^4$?

[666] $m^4 + 2 - m - 2m^3$?

[667] $10by - 25bx - 6ay + 15ax$?

[656] $x^2 - 3x + 2$?

[657] $x^2 - 3x - 4$?

[658] $a^2 - 5a + 4$?

[659] $m^2 - 3mn + 2n^2$?

[660] $a^2 - 6a + 5$?

[661] $x^2 - 7xy + 6y^2$?

[662] $5a + 5b - ax - bx$?

[663] $x^4 - 3x^3 + 3x^2 - 9x$?

2 Дробные выражения

2.1 Упрощение алгебраической дроби

[_30] Сократить дробь:

1) [20] $\frac{14a}{21ab}$ $\boxed{\frac{2}{3b}}$

2) [52] $\frac{x^5}{x^7}$ $\boxed{\frac{1}{x^2}}$

3) [21] $\frac{56x^2y^4}{24x^3y}$ $\boxed{\frac{7y^3}{3x}}$

4) [49] $\frac{44a^8b^6}{55a^8b^5}$ $\boxed{\frac{4b}{5}}$

5) [51] $\frac{25x^4y^2}{100x^3y}$ $\boxed{\frac{xy}{4}}$

6) [53] $\frac{8m^3n}{16m^2n}$ $\boxed{\frac{m}{2}}$

7) [54] $\frac{24a^5b^7c}{44a^7b^4c}$ $\boxed{\frac{6b^3}{11a^2}}$

8) [55] $\frac{ab(a+3)}{a^2b(a+3)}$ $\boxed{\frac{1}{a}}$

9) [56] $\frac{15a(a-b)}{20b(a-b)}$ $\boxed{\frac{3a}{4b}}$

10) [57] $\dfrac{2(x+y)}{4ax}$ $\dfrac{x+y}{2ax}$

11) [58] $\dfrac{a+b}{a+b}$ 1

12) [59] $\dfrac{2(x-1)}{5(x-1)}$ $\dfrac{2}{5}$

13) [60] $\dfrac{3a(a-b)}{6a(a+b)}$ $\dfrac{a-b}{2(a+b)}$

14) [61] $\dfrac{4x(x-y^3)}{16x^2y(x-y)}$ $\dfrac{(x-y)^2}{4xy}$

[_31] Сократить дробь:

1) [63] $\dfrac{x-y}{y-x}$ -1

2) [64] $\dfrac{2(a-b)}{3(b-a)}$ $-\dfrac{2}{3}$

3) [65] $\dfrac{4xy(x-y)}{2x(y-x)}$ $-2y$

4) [66] $\dfrac{6a^2b^4(4-b)}{14ab^3(b-4)}$ $-\dfrac{3ab}{7}$

5) [67] $\dfrac{3(x-2)^2}{2(2-x)}$ $\dfrac{3(2-x)}{2}$

6) [68] $\dfrac{15(x-3)^3}{5(3-x)^2}$ $3(x-3)$

7) [69] $\dfrac{a(x-2y)}{b(2y-x)}$ $-\dfrac{a}{b}$

8) [70] $-\dfrac{7b-14b^2}{42b^2-21b}$ $\dfrac{1}{3}$

9) [71] $\dfrac{6x(x-y)}{2x^3(y-x)}$ $-\dfrac{3}{x^2}$

[_32] Сократить дробь:

1) [73] $\dfrac{(x-y)^2}{(y-x)^2}$ 1

2) [74] $\dfrac{(-a-b)^2}{a+b}$ $a+b$

3) [75] $\dfrac{a-b}{(b-a)^2}$ $\dfrac{1}{a-b}$

4) [76] $\dfrac{(a+b)^2}{(-a-b)^2}$ 1

5) [77] $\dfrac{(2a-2b)^2}{a-b}$ $4(a-b)$

6) [78] $\dfrac{(2x+2y)^2}{(3y+3x)^2}$ $\dfrac{4}{9}$

7) [79] $\dfrac{(3y+12x)^2}{y+4x}$ $9(y+4x)$

8) [80] $\dfrac{(-3x-6y)^2}{5x+10y}$ $\dfrac{9(x+2y)}{5}$

9) [81] $\dfrac{8a^2-2b^2}{(8a+4b)^2}$ $\dfrac{2a-b}{8(2a+b)}$

[_33] Сократить дробь:

1) [83] $\dfrac{2x+2y}{4}$ $\dfrac{x+y}{2}$

2) [84] $\dfrac{3x+12y}{6xy}$ $\dfrac{x+4}{2xy}$

3) [85] $\dfrac{15a-20b}{10a}$ $\dfrac{3a-4b}{2a}$

4) [86] $\dfrac{2x-4}{3(x-2)}$ $\dfrac{2}{3}$

5) [87] $\dfrac{5x+25}{3x+15}$ $\dfrac{3}{5}$

6) [88] $\dfrac{2a-2b}{4a-4b}$ $\dfrac{1}{2}$

7) [89] $\dfrac{4x-4y}{8xy}$ $\dfrac{x-y}{2xy}$

8) [90] $\dfrac{ax-bx}{cx+dx}$ $\dfrac{a-b}{c+d}$

9) [91] $\dfrac{xc+yc}{ac+bc}$ $\dfrac{x+y}{a+b}$

10) [92] $\dfrac{x^2}{x^2+xy}$ $\dfrac{x}{x+y}$

11) [93] $\dfrac{xy}{x-xy}$ $\dfrac{y}{1-y}$

12) [94] $\dfrac{x^2y}{x^2y-xy^2}$ $\dfrac{x}{x-y}$

13) [95] $\dfrac{ax^2-bx^2}{x^2y+x^3}$ $\dfrac{a-b}{y+x}$

14) [96] $\dfrac{x^2-x}{ax-bx}$ $\dfrac{x-1}{a-b}$

15) [97] $\dfrac{x^3-x^2y}{2x^2y+2x^2}$ $\dfrac{x-y}{2(y+1)}$

[_34] Сократить дробь:

1) [99] $\dfrac{a^6+a^4}{a^4+a^2}$ a^2

2) [100] $\dfrac{y^6-y^8}{y^2-y^4}$ $\dfrac{1}{y^4}$

3) [101] $\dfrac{x^7-x^{10}}{x^5-x^2}$ $-x^5$

4) [102] $\dfrac{y^6-y^4}{y^3-y}$ y^3

5) [103] $\dfrac{2x^5+2x^7}{4x+4x^3}$ $\dfrac{x^4}{2}$

6) [104] $\dfrac{6x^8-2x^5}{3x^5-x^2}$ $2x^3$

7) [105] $\dfrac{10x^2y-2xy}{5x^3y^2-x^2y}$ $\dfrac{2}{x}$

8) [106] $\dfrac{15a^4-3a^2}{2a^4-10a^6}$ $-\dfrac{3}{2a^2}$

9) [107] $\dfrac{-3x^7-3x^6}{-5x^5-5x^4}$ $\dfrac{3x^2}{5}$

[_36] Сократить дробь:

1) [109] $\dfrac{a^2-b^2}{a+b}$ $a-b$

2) [110] $\dfrac{x-1}{x^2-1}$ $\dfrac{1}{x+1}$

3) [111] $\dfrac{x^2-y^2}{3x+3y}$ $\dfrac{x-y}{3}$

4) [112] $\dfrac{xa+xb}{a^2-b^2}$ $\dfrac{x}{a-b}$

5) [113] $\dfrac{x^2-2x+1}{x^2-1}$ $\dfrac{x-1}{x+1}$

6) [114] $\dfrac{a^2-b^2}{b^2+2ab+a^2}$ $\dfrac{a-b}{a+b}$

7) [115] $\dfrac{x^2-y^2}{(y-x)^2}$ $\dfrac{x+y}{x-y}$

8) [116] $\dfrac{a-a^2}{a^2-1}$ $-\dfrac{a}{a+1}$

9) [117] $\dfrac{x^2+x}{x^3-x}$ $\dfrac{1}{x-1}$

10) [118] $\dfrac{y^3-2y^2}{4-y^2}$ $-\dfrac{y^2}{2+y}$

11) [119] $\dfrac{3m-3n}{m^3-n^3}$ $\dfrac{3}{m^2+mn+n^2}$

12) [120] $\dfrac{1-a^3}{1+a+a^2}$ $\dfrac{?}{?}$

13) [121] $\dfrac{x^3-y^3}{x^2-y^2}$ $\dfrac{?}{?}$

14) [122] $\dfrac{3x^2-3x+3}{x^3+1}$ $\dfrac{?}{?}$

15) [123] $\dfrac{a^2-4a+4}{a^2-4}$ $\dfrac{?}{?}$

16) [124] $\dfrac{3m^2+6mn+3n^2}{12n^2-12m^2}$ $\dfrac{?}{?}$

17) [125] $\dfrac{x^2-y^2}{y^3-x^3}$ $\dfrac{?}{?}$

18) [126] $\dfrac{3a^3-3b^3}{6a^2-6b^2}$ $\dfrac{?}{?}$

19) [127] $\dfrac{9a^2-9b^2}{6a^3+6b^3}$ $\dfrac{?}{?}$

20) [128] $\dfrac{(x^3-y^3)(x+y)}{3x^2-3y^2}$ $\dfrac{x^2+xy+y^2}{3}$

2.2 Сложение и вычитание дробей с одинаковыми знаменателями

[_35] Представить в виде несократимой дроби:

1) [130] $\frac{x}{2}+\frac{y}{2}$ $\boxed{\frac{x+y}{2}}$

2) [131] $\frac{a}{7}-\frac{b}{7}$ $\boxed{\frac{a-b}{7}}$

3) [132] $\frac{3x}{5}+\frac{2y}{5}$ $\boxed{\frac{3x+2y}{5}}$

4) [133] $\frac{5x}{12}+\frac{2y}{12}$ $\boxed{\frac{5x+2y}{12}}$

5) [134] $\frac{x^2}{3}-\frac{x^3}{3}$ $\boxed{\frac{x^2-x^3}{3}}$

6) [135] $\frac{3x^2}{4}-\frac{x^2}{4}$ $\boxed{\frac{x^2}{2}}$

7) [136] $\frac{12x}{11}+\frac{9x}{11}+\frac{x}{11}$ $\boxed{2x}$

8) [137] $\frac{3ab}{5}+\frac{16ab}{5}-\frac{4ab}{5}$ $\boxed{3ab}$

9) [138] $\frac{x}{7}+\frac{2x}{7}+\frac{4x}{7}$ $\boxed{x}$

10) [139] $\frac{2a^3}{2}+\frac{3a^3}{2}+\frac{5a^3}{2}$ $\boxed{5a^3}$

11) [140] $\frac{0,2x}{5}+\frac{1,3x}{5}$ $\boxed{0,3x}$

[_37] Представить в виде несократимой дроби:

1) [826] $\frac{x-1}{3}+\frac{1}{3}$ $\boxed{\frac{x}{3}}$

2) [827] $\frac{2x}{7}-\frac{1-x}{7}$ $\boxed{\frac{3x-1}{7}}$

3) [828] $\frac{2k+m}{6}+\frac{3k}{6}$ $\boxed{\frac{5k+m}{6}}$

4) [829] $\frac{x}{2}-\frac{x-y}{2}$ $\boxed{\frac{y}{2}}$

5) [830] $\frac{2x+1}{3}+\frac{8-2x}{3}$ $\boxed{3}$

6) [831] $\frac{2k}{9}-\frac{k+1}{9}$ $\boxed{\frac{k-1}{9}}$

7) [832] $\frac{11x-8y}{13}+\frac{2x-5y}{13}$ $\boxed{x-y}$

8) [833] $\frac{7x^2+2x}{8}-\frac{3x^2-2x}{8}$ $\boxed{\frac{x^2}{2}}$

9) [834] $\frac{9a+3}{12}+\frac{9+3a}{12}$ $\boxed{a+1}$

10) [835] $\frac{x^2}{9}+\frac{13x^2+7}{9}-\frac{5x^2+2}{9}$ $\boxed{x^2+1}$

11) [836] $\frac{2y^3-15x^2}{17}+\frac{19y^3-16x^2}{17}-\frac{x^2-13y^3}{17}$ $\boxed{2(y^3-x^2)}$

[_38] Представить в виде несократимой дроби:

1) [837] $\frac{1+a}{a}-\frac{1}{a}$ $\boxed{1}$

2) [838] $\frac{a}{x}+\frac{4}{x}$ $\boxed{\frac{a+4}{x}}$

3) [839] $\frac{3x^2}{5a}+\frac{2x^2}{5a}$ $\boxed{\frac{x^2}{a}}$

4) [840] $\frac{3x+7}{4b}-\frac{x-3}{4b}$ $\boxed{\frac{x+5}{2b}}$

5) [841] $\frac{x}{2a}-\frac{3x}{2a}$ $\boxed{-\frac{x}{a}}$

6) [842] $\frac{x+13}{x}+\frac{x-13}{x}$ $\boxed{1}$

7) [843] $\frac{3x+2}{5x}-\frac{2x+3}{5x}$ $\boxed{\frac{x+1}{x}}$

8) [844] $\frac{y^3-14}{y^2}-\frac{3y^3-14}{y^2}$ $\boxed{-2y}$

9) [845] $\frac{9x^2}{4a}-\frac{x^2}{4a}$ $\boxed{\frac{2x^2}{a}}$

[_39] Представить в виде несократимой дроби:

1) [846] $\frac{2}{x+y}+\frac{3}{x+y}$ $\frac{5}{x+y}$

2) [847] $\frac{2}{a-1}-\frac{1}{a-1}$ $\frac{1}{a-1}$

3) [848] $\frac{x+2}{a+b}+\frac{x-2}{a+b}$ $\frac{2x}{a+b}$

4) [849] $\frac{a+1}{a+b}-\frac{4-a}{a+b}$ $\frac{2a-3}{a+b}$

5) [850] $\frac{x+3}{2x+7}+\frac{x+4}{2x+7}$ 1

6) [851] $\frac{2x+1}{2x-3}+\frac{2x-7}{2x-3}$ 2

7) [852] $\frac{7a-1}{a+2}-\frac{7-a}{a+2}$?

8) [853] $\frac{12x^2+1}{x+1}-\frac{12x^2-4x-3}{x+1}$ 4

9) [854] $\frac{x^2+x}{y+12}-\frac{x+14}{y+12}$?

10) [855] $\frac{x-1}{2a+2}+\frac{13-x}{2a+2}$ $\frac{6}{a+1}$

11) [856] $\frac{2x-3y}{5x+y}+\frac{7x+3y}{5x+y}$ $\frac{9x}{5x+y}$

12) [857] $\frac{7a^3+b^2}{3a-b}-\frac{a^3-3b^2}{3a-b}$ $\frac{6a^3+4b^2}{3a-b}$

2.3 Сложение и вычитание дробей с разными знаменателями

[_40] Представить в виде несократимой дроби:

1) [858] $\frac{a}{3}+\frac{b}{2}$?

2) [859] $\frac{x}{4}-\frac{y}{2}$?

3) [860] $\frac{2x}{3}-\frac{4}{5}$?

4) [861] $\frac{4y}{7}+\frac{2x}{5}$?

5) [862] $\frac{3x}{4}+\frac{2x}{3}$?

6) [863] $\frac{x^2}{4}-\frac{2x}{2}$?

7) [864] $\frac{7x^2}{3}+\frac{13x^2}{5}$?

8) [865] $\frac{6xy^2}{7}-\frac{5xy^2}{9}$?

[_41] Представить в виде несократимой дроби:

1) [866] $\frac{1}{a}+\frac{1}{b}$ $\frac{a+b}{ab}$

2) [867] $\frac{3}{x}-\frac{5}{y}$ $\frac{3y-5x}{xy}$

3) [868] $\frac{x}{a}+\frac{y}{b}$ $\frac{bx+ay}{ab}$

4) [869] $\frac{5a}{7}-\frac{b}{x}$?

5) [870] $\frac{1}{2x}+\frac{1}{3}$?

6) [871] $\frac{1}{x}-\frac{1}{xy}$ $\frac{y-1}{xy}$

7) [872] $\frac{4}{5x}+\frac{2}{3x}$?

8) [873] $\frac{4x}{3y}-\frac{y}{3x}$ y

[_42] Представить в виде несократимой дроби:

1) [874] $\frac{16}{4-a}-\frac{a^2}{4-a}$ $4+a$

2) [875] $\frac{49}{x+7}-\frac{x^2}{x+7}$ $x-7$

3) [876] $\frac{5x-1}{x^2-y^2}-\frac{5y-1}{x^2-y^2}$ $\frac{5}{x+y}$

4) [877] $\frac{11}{b^2-64}+\frac{b-3}{b^2-64}$ $\frac{1}{b-8}$

5) [878] $\frac{2x+y}{(x-y)^2}+\frac{2y-5x}{(x-y)^2}$ $\frac{3}{y-x}$

6) [879] $\dfrac{15x+7y}{(x+y)^2}-\dfrac{13x+5y}{(x+y)^2}$ $\dfrac{2}{x+y}$

[_43] Представить в виде несократимой дроби:

1) [880] $\dfrac{a}{b-1}+\dfrac{6}{1-b}$?

2) [881] $\dfrac{x}{2-c}-\dfrac{11}{c-2}$?

3) [882] $\dfrac{2x}{a-b}+\dfrac{2y}{b-a}$?

4) [883] $\dfrac{5m}{2x-m}+\dfrac{10x}{m-2x}$?

5) [884] $\dfrac{x^2+16}{a-4}+\dfrac{8x}{4-a}$?

6) [885] $\dfrac{x^2+9y^2}{x-3y}+\dfrac{6xy}{3y-x}$?

7) [886] $\dfrac{9a}{a-b}+\dfrac{4b}{b-a}$?

8) [887] $\dfrac{4x}{x-b}-\dfrac{4y}{b-x}$?

9) [888] $\dfrac{a-3}{a-1}-\dfrac{2}{1-a}$?

10) [889] $\dfrac{x}{2x-1}+\dfrac{3x-1}{1-2x}$?

11) [890] $\dfrac{m}{m^2-9}+\dfrac{3}{9-m^2}$?

12) [891] $\dfrac{x^2}{x-1}+\dfrac{1}{1-x}$?

[_44] Представить в виде несократимой дроби:

1) [892] $\dfrac{5x-3}{6x}+\dfrac{x+2}{4x}$?

2) [893] $\dfrac{2b}{mx}-\dfrac{5b}{nx}$?

3) [894] $\dfrac{2a-3b}{m}+\dfrac{4a-5b^2}{mb}$?

4) [895] $\dfrac{x-y}{xy}-\dfrac{x-k}{xk}$?

5) [896] $\dfrac{15x-y}{12x}-\dfrac{x-4y}{9x}$?

6) [897] $\dfrac{7a+4}{8p}-\dfrac{3a-4}{6p}$?

[_45] Представить в виде несократимой дроби:

1) [898] $\dfrac{x}{y^2}-\dfrac{1}{y}$?

2) [899] $\dfrac{2}{x^2}-\dfrac{5}{x^3}$?

3) [900] $\dfrac{1-a}{a^4}+\dfrac{1}{a^3}$?

4) [901] $\dfrac{8}{b^6}-\dfrac{2b}{b^4}$?

5) [902] $\dfrac{1}{3a^7}+\dfrac{2-a^2}{a^9}$?

6) [903] $\dfrac{x+y}{x^2}+\dfrac{x-y}{xy}$?

7) [904] $\dfrac{1}{a^3b^2}+\dfrac{1}{a^2b^3}$?

8) [905] $\dfrac{5}{a^3b^5}-\dfrac{2}{a^6b^2}$?

9) [906] $\dfrac{2x-3y}{x^2y}+\dfrac{4x-5y}{xy^2}$?

10) [907] $\dfrac{x-3y}{xy^2}-\dfrac{3y-x}{x^2y}$?

11) [908] $\dfrac{3}{a^4b^3c^2}-\dfrac{2}{ab^5c^3}$?

12) [909] $\dfrac{x^4y^2}{2a^4b^2}+\dfrac{3xy^3}{a^3b^3}$?

13) [910] $\dfrac{2xy-1}{4x^3}-\dfrac{3y-x}{6x^2}$?

14) [911] $\dfrac{1-y^2}{3xy}+\dfrac{2y^3-1}{6xy^2}$?

15) [912] $\dfrac{3}{5a^3}-\dfrac{3}{5a^2}$?

16) [913] $\dfrac{a^2}{6x^5}+\dfrac{a}{3x^6}$?

[_46] Представить в виде несократимой дроби:

1) [913] $\dfrac{a^2}{6x^5}+\dfrac{a}{3x^6}$?

2) [914] $2-\dfrac{5}{x-3}$?

3) [915] $1+\dfrac{(a-b)}{a+b}$?

4) [916] $1-\dfrac{x}{5}-\dfrac{y}{4}$?

5) [917] $15-\dfrac{1}{x}+\dfrac{1}{y}$?

6) [918] $3x-\dfrac{x-1}{4}-\dfrac{x+2}{3}$?

7) [919] $\frac{a+b}{3} - a + b$?

8) [920] $\frac{x-3}{4} - 1 - \frac{x-4}{3}$?

9) [921] $a + b - \frac{a^2+b^2}{a}$?

10) [922] $\frac{a^2+b^2}{a+b} + a - b$?

11) [923] $\frac{(x+y)^2}{y} - 2x$?

12) [924] $\frac{(a-b)^2}{2a} + b$?

13) [925] $a - b - \frac{a^2+b^2}{b}$?

14) [926] $x - \frac{x-y}{2} + \frac{x+y}{4}$?

15) [927] $x - \frac{x-y}{2} + \frac{x+y}{4}$?

16) [928] $\frac{2}{a} - 3 - \frac{6}{a}$?

17) [929] $5 - \frac{2m-n}{4} + \frac{m+5n}{12}$?

[_47] Представить в виде несократимой дроби:

1) [930] $\frac{4x-2y}{7} - \frac{y+5x}{2} - 2$?

2) [931] $\frac{3x}{5(x+y)} - \frac{2y}{3(x+y)}$?

3) [932] $\frac{a^2}{5(a-b)} - \frac{b^3}{4(a-b)}$?

4) [933] $\frac{1}{2x-2} + \frac{2}{5x-5}$?

5) [934] $\frac{7x}{3x+3} - \frac{x}{9x+9}$?

6) [935] $\frac{2a}{4x+4y} + \frac{4b}{8x+8y}$?

7) [936] $\frac{2m}{ax+bx} + \frac{3y}{ay+by}$?

8) [937] $\frac{5x}{10a-10b} - \frac{3x}{15a-15b}$?

9) [938] $\frac{y}{ax-bx} - \frac{x}{ay-by}$?

10) [939] $\frac{1}{2x^2y-xy} + \frac{2}{y-2xy}$?

11) [940] $\frac{3}{3m^2n-6mn^2} - \frac{2}{4mn-2m^2}$?

12) [941] $\frac{15}{x^3y-15x^2y^2} - \frac{6y}{9xy^3-6x^2y^2}$?

13) [942] $\frac{3b}{2a^3b-8a^2b^2} - \frac{5a}{12a^3b-3a^4}$?

2.4 Произведение дробей

[_48] Представить в виде несократимой дроби:

1) [943] $\frac{7b^4}{5c^5y} \cdot \frac{18c^4y^3}{35b^4c}$ $\frac{2y^2}{5c^2}$

2) [944] $\left(\frac{xy}{ab}\right)^2 \cdot \frac{xab}{y^2}$ $\frac{x^3}{ab}$

2.5 Упрощение дробных выражений

[_49] Упростить выражение:

1) [945] $\frac{x^2}{x^2+4x+4} \cdot \frac{8x^2-32}{x^3-2x^2} + \frac{x^5-8x^2}{x} : (x^2-4)$?

2) [946] $\frac{x^3-9xy^2}{9y^2+x^2} \cdot \left(\frac{x+3y}{x^2-3xy} + \frac{x-3y}{3xy+x^2}\right)$?

3) [947] $\left(\frac{4a}{a^2-1} + \frac{a-1}{a+1}\right) \cdot \frac{a}{a+1} - \frac{a}{a-1}$?

4) [948] $\left(\dfrac{2}{(a-2)^2}-\dfrac{a}{4-a^2}\right):\dfrac{4+a^2}{4-a^2}+\dfrac{2}{a-2}$?

5) [748] $\left(x+\dfrac{3-x^2}{x+1}\right):\dfrac{x+3}{1-x^2}$ $1-x$

6) [749] $\left(\dfrac{4}{a+1}+\dfrac{2a}{a^2-1}+\dfrac{-1}{a-1}\right)\cdot(a^2+2a+1)$ $5(a+1)$

7) [750] $\dfrac{a-1}{2a+2}+\dfrac{a+1}{3-3a}+\dfrac{5a^3-1}{3a^2-3}$ $\dfrac{1+10a}{6}$

[_50] Упростить выражение и вычислить значение выражения:

1) [641] $\dfrac{a+b}{a^2-b^2}+a+\dfrac{b}{a}$ при $a=3,\ b=4$?

2) [642] $\dfrac{3m^2+6mn+3n^2}{6n^2-6m^2}$ при $m=0,5,\ n=\dfrac{2}{3}$?

3) [643] $\dfrac{2c^2-2b^2}{4b^2-8bc+4c^2}$ при $b=0,25,\ c=\dfrac{1}{3}$?

4) [636] $\left(\dfrac{n}{a}+\dfrac{a^2}{n^2}\right):\left(\dfrac{1}{a^2n}+\dfrac{1}{n^3}-\dfrac{1}{an^2}\right)-a^2n$ при $a=0,02,\ n=-10$ $an^2,\ 2$

5) [949] $\dfrac{x^2-10x+25}{3x+12}\cdot\dfrac{x^2-16}{2x-10}$ при $x=-1$?

6) [950] $\left(\dfrac{b}{a}-\dfrac{a}{b}\right)\cdot\dfrac{1}{b+a}$ при $a=1,\ b=\dfrac{1}{3}$?

3 Иррациональные выражения

[17] Упростить выражение:

$$\frac{x\sqrt{x}-1}{x-4\sqrt{x}+3}-\frac{\sqrt{x}+10}{\sqrt{x}-3}$$

и найти значение выражения при $x=25$

$\sqrt{x}+3;\ 8$

[775] Упростить выражение:

$$\frac{a-b}{a+b+2\sqrt{ab}}:\frac{a^{-\frac{1}{2}}-b^{-\frac{1}{2}}}{a^{-\frac{1}{2}}+b^{-\frac{1}{2}}}$$

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