Usuń niewymierność z mianownika

(1) $\dfrac{1}{\sqrt{2}}$ (2) $\dfrac{1}{\sqrt{3}}$ (3) $\dfrac{1}{\sqrt{7}}$ (4) $\dfrac{1}{\sqrt{4}}$

(5) $\dfrac{\sqrt{2}}{\sqrt{3}}$ (6) $\dfrac{\sqrt{2}+1}{\sqrt{5}}$ (7) $\dfrac{\sqrt{2}+\sqrt{3}}{\sqrt{7}}$ (8) $\dfrac{\sqrt{7}-2}{\sqrt{2}}$

(9) $\dfrac{2-\sqrt{11}}{\sqrt{3}}$ (10) $\dfrac{3\sqrt{3}}{\sqrt{2}}$ (11) $\dfrac{3\sqrt{7}-2\sqrt{2}}{3\sqrt{2}}$ (12) $\dfrac{-\sqrt{7}-1}{-\sqrt{2}}$

(13) $\dfrac{1}{\sqrt{2}+1}$ (14) $\dfrac{1}{\sqrt{2}-1}$ (15) $\dfrac{\sqrt{2}}{\sqrt{5}-1}$ (16) $\dfrac{3\sqrt{2}}{\sqrt{7}+3}$

(17) $\dfrac{2\sqrt{3}-4}{1-\sqrt{2}}$ (18) $\dfrac{\frac{1}{2}+\sqrt{2}}{\sqrt{2}-2}$ (19) $\dfrac{\sqrt{2}-\sqrt{3}}{\sqrt{5}-\sqrt{7}}$ (20) $\dfrac{\sqrt{3}-3\sqrt{2}}{\sqrt{7}+2\sqrt{3}}$

Oblicz

(21) $\left(\frac{3+\sqrt{2}}{2}\right)^2$

(22) $\left(\frac{1+\sqrt{3}}{\sqrt{2}}\right)^2$

(23) $3 \cdot \sqrt[3]{27} + 3$

(24) $\frac{1}{8}\left(4 - \frac{\sqrt{2}}{3}\right)^2$

(25) $-\left[\sqrt{2} - \sqrt{3} \cdot (\sqrt{6} - 1)\right]$

(26) $(\sqrt{2} + \sqrt{3})(\sqrt{2} - \sqrt{3})$

(27) $\left(3 \cdot 3^{\frac{1}{2}} + 3^{\frac{1}{3}}\right) \cdot \sqrt{3}$

(28) $\sqrt[7]{3} \cdot 3^{\frac{1}{7}} \cdot \left(\sqrt{3} \cdot \sqrt{2} - \sqrt{6}\right)$

(29) $3^7 \cdot 3^{-7} \cdot 3^3$

(30) $2^5 \cdot 2^{-4} - 4^7 : 4^6$

(31) $2^7 \cdot 4^{-3} + 3^{14} : \left(\frac{1}{3}\right)^{-15}$

(32) $1 - \frac{1}{3^2} + 3 \cdot \sqrt{3} \cdot 3^{\frac{1}{2}}$

(33) $\frac{-2 + 16^{-\frac{1}{2}}}{\sqrt{2}}$

(34) $\frac{3^{13}}{9^5} \cdot 9$

(35) $\frac{2 \cdot 2^7 : \left(\frac{1}{4}\right)^{-2}}{2^7}$

(36) $\frac{\sqrt[3]{9} \cdot 3^{-2} \cdot \sqrt[4]{3}}{3}$

Narysuj wykres funkcji

(37) $y = x$

(38) $y = 2x$

(39) $y = 3x$

(40) $y = \frac{1}{2}x$

(41) $y = \frac{1}{3}x$

(42) $y = x + 1$

(43) $y = x + 2$

(44) $y = x - 2$

(45) $y = 2x - 1$

(46) $y = 3x - 2$

(47) $f(x) = 2 - x$

(48) $f(x) = \frac{1}{2}x - 2$

(49) $y = 2x - 4$

(50) $y = -x$

(51) $y = -2x$

(52) $y = -3x - 2$

(53) $y = -\frac{1}{2}x - 4$

(54) $y = 2$

(55) $g(t) = 3t + 1$

(56) $x \mapsto x - 2$

(57) $t \mapsto -2 - 2t$

(58) $f(x) = 0$

(59) $2y = 4x - 2$

(60) $y = x \cdot \sqrt{2} - 1$

Rozwiąż równanie

(61) $-3x = 4 - 2 \cdot (3x + 2)$

(62) $x^2 - 2x = 4 + (x + 1)^2$

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

(64) $x - (2x + 1)^2 = -x - 4x^2 + 3$

(65) $4x + 1 = 3x - \sqrt{2}$

(66) $1 - 3x = 3\sqrt{2} \cdot x - 3$

(67) $2 - \frac{1}{2}(x + 7) = frac3 - x2$

(68) $\frac{2 - x}{3} + \frac{x - 4}{2} = 1$

(69) $(x + 4)(x + 3) = x^2 - 7$

(70) $\frac{4x - 2}{2} - \frac{3x - 3}{3} = 4 - x$

(71) $\frac{2x + 7}{3} = \frac{4x - 1}{5}$

(72) $\frac{7 - 3x}{2} - x + 4 = 3x - 1$

(73) $x(x - 3) - x^2 = 0$

(74) $(x + 4)(3 - x) = -x^2 - (2x + 1)$