

Usuń niewymierność z mianownika

$$(1) \quad \frac{1}{\sqrt{2}}$$

$$(2) \quad \frac{1}{\sqrt{3}}$$

$$(3) \quad \frac{1}{\sqrt{7}}$$

$$(4) \quad \frac{1}{\sqrt{4}}$$

$$(5) \quad \frac{\sqrt{2}}{\sqrt{3}}$$

$$(6) \quad \frac{\sqrt{2}+1}{\sqrt{5}}$$

$$(7) \quad \frac{\sqrt{2}+\sqrt{3}}{\sqrt{7}}$$

$$(8) \quad \frac{\sqrt{7}-2}{\sqrt{2}}$$

$$(9) \quad \frac{2-\sqrt{11}}{\sqrt{3}}$$

$$(10) \quad \frac{3\sqrt{3}}{\sqrt{2}}$$

$$(11) \quad \frac{3\sqrt{7}-2\sqrt{2}}{3\sqrt{2}}$$

$$(12) \quad \frac{-\sqrt{7}-1}{-\sqrt{2}}$$

$$(13) \quad \frac{1}{\sqrt{2}+1}$$

$$(14) \quad \frac{1}{\sqrt{2}-1}$$

$$(15) \quad \frac{\sqrt{2}}{\sqrt{5}-1}$$

$$(16) \quad \frac{3\sqrt{2}}{\sqrt{7}+3}$$

$$(17) \quad \frac{2\sqrt{3}-4}{1-\sqrt{2}}$$

$$(18) \quad \frac{\frac{1}{2}+\sqrt{2}}{\sqrt{2}-2}$$

$$(19) \quad \frac{\sqrt{2}-\sqrt{3}}{\sqrt{5}-\sqrt{7}}$$

$$(20) \quad \frac{\sqrt{3}-3\sqrt{2}}{\sqrt{7}+2\sqrt{3}}$$

Oblicz

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Narysuj wykres funkcji

$$(37) \quad y = x$$

$$(38) \quad y = 2x$$

$$(39) \quad y = 3x$$

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

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

$$(42) \quad y = x + 1$$

$$(43) \quad y = x + 2$$

$$(44) \quad y = x - 2$$

$$(45) \quad y = 2x - 1$$

$$(46) \quad y = 3x - 2$$

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

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

$$(49) \quad y = 2x - 4$$

$$(50) \quad y = -x$$

$$(51) \quad y = -2x$$

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

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

$$(54) \quad y = 2$$

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

$$(56) \quad x \mapsto x - 2$$

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

$$(58) \quad f(x) = 0$$

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

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

Rozwiąż równanie

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

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