

Mavzu: Haqiqiy sonlar ustida amallar

1. a) $\frac{(3,25 - 3\frac{1}{20}) : 0,2 - \frac{3}{4} \cdot 1\frac{1}{3}}{2,5 \cdot 0,01 - 0,1}$; b) $\frac{(1\frac{3}{40} - 1,275) : 0,1 + 2,4 \cdot \frac{5}{6}}{0,7 : 0,01 + 4}$;

б) $\frac{(1,24 - \frac{1}{25}) \cdot 2,5 - \frac{1}{6} : \frac{1}{18}}{1,4 : 0,1 - 2}$; г) $\frac{(1\frac{7}{40} - 1,3) \cdot 0,4 + \frac{3}{50} : 1\frac{1}{5}}{1,1 : 0,1 - 9}$.

Хисобланг.

2. $\frac{1}{\sqrt{11 - 6\sqrt{2}} + 1} - \frac{1}{\sqrt{11 + 6\sqrt{2}} + 1}$

3. $\left(\frac{6 + 4\sqrt{2}}{\sqrt{2} + \sqrt{6 + 4\sqrt{2}}} + \frac{6 - 4\sqrt{2}}{\sqrt{2} - \sqrt{6 - 4\sqrt{2}}} \right)^2$

4. Касрни қисқартиринг:

$$1) \frac{\sqrt{15} - \sqrt{6}}{\sqrt{35} - \sqrt{14}};$$

$$2) \frac{\sqrt{10} + \sqrt{15}}{\sqrt{8} + \sqrt{12}};$$

$$3) \frac{a + \sqrt{ab}}{b + \sqrt{ab}};$$

$$4) \frac{\sqrt[3]{x^2 y} - \sqrt[3]{xy^2}}{\sqrt[3]{ax} - \sqrt[3]{ay}};$$

$$5) \frac{\sqrt[4]{27} + 3}{\sqrt[4]{3} + \sqrt[3]{3}};$$

$$6) \frac{\sqrt[4]{125} - 5}{\sqrt[4]{5} - \sqrt[3]{5}};$$

5. Махражни иррационалликдан қутқаринг:

$$1) \frac{18}{\sqrt{6}}; \quad 2) \frac{46}{\sqrt{8}}; \quad 3) \frac{6}{\sqrt[4]{12}}; \quad 4) \frac{a^2 - b^2}{\sqrt[3]{a-b}}; \quad 5) \frac{a-b}{\sqrt[3]{a^2-b^2}};$$

$$6) \frac{\sqrt{a} - \sqrt{b}}{\sqrt{a} + \sqrt{b}}; \quad 7) \frac{a}{1 - \sqrt{a}};$$

$$8) \frac{2a}{3 + \sqrt{2a}}; \quad 9) \frac{5 - 2\sqrt{2}}{3\sqrt{5} - 4\sqrt{22}}; \quad 10) \frac{3\sqrt{5} - 2\sqrt{2}}{2\sqrt{5} - 3\sqrt{2}};$$

$$11) \frac{\sqrt{x^2 - a^2} + \sqrt{x^2 + a^2}}{\sqrt{x^2 - a^2} - \sqrt{x^2 + a^2}};$$

$$12) \frac{7\sqrt{15} - 2\sqrt{3}}{10\sqrt{3} + 8\sqrt{5}};$$

$$13) \frac{7 - 4\sqrt{3}}{\sqrt{26} - 15\sqrt{3}};$$

6. Махражни иррационалликдан кутқаринг:

$$1) \frac{\sqrt{x^2+1}}{\sqrt{x^2+1}-\sqrt{x^2-1}};$$

$$2) \frac{1}{\sqrt{5}+\sqrt{7}+\sqrt{11}};$$

$$3) \frac{b}{\sqrt{3}+\sqrt{5}+\sqrt{7}};$$

$$4) \frac{a}{2+\sqrt{2}+\sqrt{3}+\sqrt{6}};$$

$$5) \frac{n}{\sqrt[3]{a}+\sqrt[3]{b}};$$

$$6) \frac{m}{\sqrt[3]{a}-\sqrt[3]{b}};$$

$$7) \frac{6}{\sqrt[3]{7}-\sqrt[3]{4}};$$

$$8) \frac{n}{\sqrt[3]{a^2}-\sqrt[3]{ab}+\sqrt[3]{b^2}};$$

$$9) \frac{1}{\sqrt[3]{9}-\sqrt[3]{6}+\sqrt[3]{4}};$$

$$10) \frac{n}{\sqrt[3]{a^2}+\sqrt[3]{ab}+\sqrt[3]{b^2}};$$

$$11) \frac{1}{\sqrt[3]{49}+\sqrt[3]{35}+\sqrt[3]{25}};$$

$$12) \frac{1}{\sqrt[3]{a^2}+\sqrt[3]{ac}+\sqrt[3]{c^2}};$$

$$13) \frac{1}{\sqrt{2}-\sqrt{3}};$$

7. Суратни иррационалликдан кутқаринг

$$1) \frac{\sqrt{a}+\sqrt{b}}{a-b};$$

$$2) \frac{x\sqrt{y}-y\sqrt{x}}{xy};$$

$$3) \frac{\sqrt{a}+1}{a};$$

$$4) \frac{1-\sqrt{m}}{m};$$

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

$$6) \frac{3+\sqrt{m}}{3-\sqrt{m}};$$

$$7) \frac{a\sqrt{x}-b\sqrt{y}}{a\sqrt{x}+b\sqrt{y}};$$

$$8) \frac{a+b\sqrt{x}}{a-b\sqrt{x}};$$