

Radicais

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Turmas que utilizaram o material

Ficha 1

Escreva sob forma de expoente fracionário (ver modelo)

MODELO $\sqrt{3} = 3^{1/2}$

1. $\sqrt{17} =$

2. $\sqrt[3]{52} =$

3. $\sqrt[4]{75} =$

4. $\sqrt[5]{4} =$

5. $\sqrt[2]{a^4} =$

6. $\sqrt[3]{2} =$

7. $\sqrt{ae} =$

8. $\sqrt[3]{2^4} =$

Ficha 3

Simplifique os radicais:

MODELO: $\sqrt[4]{5} = \sqrt[4]{5^{4:2}} = \sqrt{5}$

$\sqrt[3]{2^7} = \sqrt[3]{2^6 \times 2} = 2^2 \sqrt[3]{2} = 4\sqrt[3]{2}$

1. $\sqrt[12]{79} =$

2. $\sqrt[6]{8} =$

3. $\sqrt[3]{64} =$

4. $\sqrt[5]{32} =$

5. $\sqrt[10]{256} =$

6. $\sqrt[5]{2^{23}} =$

7. $\sqrt[7]{7^7} =$

8. $\sqrt{2^5 \times 5^2} =$

Ficha 2

Escrever em forma de radical:

MODELO: $4^{\frac{2}{3}} = \sqrt[3]{4^2}$

1. $3^{\frac{3}{2}} =$

4. $11^{\frac{3}{2}} =$

2. $5^{\frac{4}{3}} =$

5. $17^{\frac{2}{5}} =$

3. $2^{\frac{1}{2}} =$

6. $3^{\frac{3}{4}} =$

7. $2^{\frac{1}{4}} =$

8. $7^{\frac{1}{3}} =$

Ficha 4

Simplifique os radicais:

Modelo: $\sqrt{x^2y^4} = xy^2$

1. $2a\sqrt{4a^3b} =$

2. $\sqrt{72a^3b^5} =$

3. $\sqrt[3]{27c^4} =$

4. $\sqrt[3]{24x^3y^5} =$

5. $\sqrt[3]{27x^5y^3} =$

6. $3x\sqrt{18x^3y^3} =$

7. $\sqrt{a^3b} =$

8. $3x^2\sqrt{12x^3} =$

Ficha 6

Exercice:

$$1. \sqrt{2} \times \sqrt{3} =$$

$$2. -3\sqrt{5} \times 4\sqrt{2} =$$

$$3. \sqrt{5} \times \sqrt{35} =$$

$$4. 3\sqrt[3]{4} \times 2\sqrt[3]{7} =$$

$$5. \frac{1}{2}\sqrt[5]{\frac{3}{4}} \times \frac{2}{3}\sqrt[5]{\frac{5}{6}} =$$

Ficha 7

Efectue:

1. $\sqrt{9} : \sqrt{3} =$

2. $4\sqrt{15} : 2\sqrt{5} =$

3. $8\sqrt[3]{20} : 4\sqrt[3]{4} =$

4. $\sqrt[3]{26} : \sqrt[3]{24} =$

5. $\frac{3}{2}\sqrt[5]{\frac{7}{3}} : \frac{1}{2}\sqrt[5]{\frac{14}{5}} =$

Ficha 8

Resolva potenciações e radiciações de radicais:

1. $(\sqrt[7]{2})^5 =$

2. $2\sqrt[5]{3}^3 =$

3. $(\frac{1}{2}\sqrt[6]{\frac{3}{5}})^2 =$

4. $(\sqrt[3]{2})^3 =$

5. $\sqrt{\sqrt{3}} =$

6. $\sqrt[3]{\sqrt{5}} =$

7. $\sqrt{2\sqrt{3}} =$

8. $\sqrt{\sqrt{\sqrt{3}}} =$

Ficha 5

Exercice:

$$1. 6\sqrt{2} + 7\sqrt{2} - 9\sqrt{2} =$$

$$2. 10\sqrt{7} - 6\sqrt{7} + 4\sqrt{7} - 9\sqrt{7} =$$

$$3. 5\sqrt{2} - \frac{\sqrt{2}}{2} + \frac{3\sqrt{2}}{2} - 4\sqrt{2} =$$

$$4. \sqrt{20} + \sqrt{45} - \sqrt{5} =$$

$$5. 5\sqrt{12} - 7\sqrt{3} + 9\sqrt{27} - 2\sqrt{243} =$$

Ficha 9

Rationalize:

$$1. \frac{1}{\sqrt{2}} =$$

$$2. \frac{5}{2\sqrt{3}} =$$

$$3. \frac{\sqrt{2}}{\sqrt{3}} =$$

$$4. \frac{5\sqrt{3}}{\sqrt{5}} =$$

$$5. \frac{8}{\sqrt[4]{32}} =$$

$$6. \frac{6}{2\sqrt[3]{6}} =$$

$$7. \frac{2}{\sqrt[4]{8}} =$$

$$8. \frac{a}{6\sqrt[5]{6^2}} =$$

Ficha 10

Rationalize:

$$1. \frac{1}{\sqrt{7} + \sqrt{2}} =$$

$$2. \frac{3}{\sqrt{5} + \sqrt{3}} =$$

$$3. \frac{2}{4 - \sqrt{3}} =$$

$$4. \frac{6}{\sqrt{5} + 1} =$$

$$5. \frac{6}{4\sqrt{2} - 3} =$$

$$6. \frac{3 + \sqrt{3}}{3 - \sqrt{3}} =$$

$$7. \frac{3\sqrt{2} + 2\sqrt{3}}{3\sqrt{2} - 2\sqrt{3}} =$$

$$8. \frac{30}{5\sqrt{3} + 3\sqrt{5}} =$$