

Grade 8 - Worksheet - Activity A
8.3 Rational Exponents

Term 3

NAME _____ CLASS _____

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Prepared by Murad Jawaada

1. Choose the correct answer, from Q1-15 Rewrite in radical form, and from 16-20 write in rational exponents form

Question 1

Rewrite $x^{1/2}$

- a. $\sqrt{x}$
- b. $\sqrt[3]{x}$
- c. x^2
- d. $\frac{1}{\sqrt{x}}$

Question 2

Rewrite $x^{1/3}$

- a. $\sqrt{x}$
- b. $\sqrt[3]{x}$
- c. x^3
- d. $\frac{1}{x^3}$

Question 3

Rewrite $x^{2/3}$

- a. $\sqrt[3]{x^2}$
- b. $(\sqrt{x})^2$
- c. $\sqrt{x^3}$
- d. $\frac{1}{\sqrt[3]{x^2}}$

Question 4

Rewrite $x^{3/2}$

- a. $\sqrt{x^3}$
- b. $\sqrt[3]{x^2}$
- c. $x\sqrt{x}$
- d. Both a and c

Question 5

Rewrite $16^{1/2}$

- a. $\sqrt{16}$
- b. $\sqrt[3]{16}$
- c. 16
- d. $\frac{1}{\sqrt{16}}$

Question 6

Rewrite $27^{1/3}$

- a. $\sqrt{27}$
- b. $\sqrt[3]{27}$
- c. 27
- d. $\frac{1}{\sqrt[3]{27}}$

Question 7

Rewrite $x^{4/3}$

- a. $\sqrt[3]{x^4}$
- b. $(\sqrt[3]{x})^4$
- c. $x\sqrt[3]{x}$
- d. All of the above

Question 8

Rewrite $x^{5/2}$

- a. $\sqrt{x^5}$
- b. $x^2\sqrt{x}$
- c. $(\sqrt{x})^5$
- d. All of the above

Question 9

Rewrite $x^{-1/2}$

- a. $\sqrt{x}$
- b. $\frac{1}{\sqrt{x}}$
- c. $\sqrt[3]{x}$
- d. $x\sqrt{x}$

Question 10

Rewrite $x^{-2/3}$

- a. $\sqrt[3]{x^2}$
- b. $\frac{1}{\sqrt[3]{x^2}}$
- c. $\frac{1}{\sqrt{x^3}}$
- d. $x\sqrt[3]{x}$

Question 11

Rewrite $8^{2/3}$

- a. $\sqrt[3]{8^2}$
- b. $(\sqrt[3]{8})^2$
- c. $\sqrt{8^3}$

Question 12

Rewrite $9^{3/2}$

- a. $\sqrt{9^3}$
- b. $(\sqrt{9})^3$
- c. $9\sqrt{9}$

Question 13

Rewrite $x^{1/4}$

- a. $\sqrt{x}$
- b. $\sqrt[4]{x}$
- c. x^4
- d. $\frac{1}{\sqrt[4]{x}}$

Question 14

Rewrite $x^{3/4}$

- a. $\sqrt[4]{x^3}$
- b. $(\sqrt[4]{x})^3$
- c. Both a and b
- d. $x\sqrt[4]{x}$

Question 15

Rewrite $x^{-3/2}$

- a. $\sqrt{x^3}$
- b. $\frac{1}{\sqrt{x^3}}$
- c. $\frac{1}{x\sqrt{x}}$
- d. Both b and c

Question 16

Rewrite $\sqrt{x}$

- a. $x^{1/2}$
- b. x^2
- c. $x^{1/3}$
- d. $x^{-1/2}$

Question 17

Rewrite $\sqrt[3]{x}$

- a. $x^{1/2}$
- b. $x^{1/3}$
- c. x^3
- d. $x^{-1/3}$

Question 18

Rewrite $\sqrt[4]{x^3}$

- a. $x^{3/4}$
- b. $x^{4/3}$
- c. $x^{1/4}$
- d. $x^{3/2}$

Question 19

Rewrite $\sqrt{x^5}$

- a. $x^{5/2}$
- b. $x^{2/5}$
- c. $x^{1/5}$
- d. x^5

Question 20

Rewrite $\sqrt[3]{x^2}$

- a. $x^{2/3}$
- b. $x^{3/2}$
- c. $x^{1/3}$
- d. $x^{-2/3}$