

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.  $x^{-2/3}$