

1) Watch this video on exponents: <https://youtu.be/LkhPRz7Hocg?si=5m3gbCbsdqixCX3L>

2) Rewrite in fraction form:  $4^{-3}$

Simplify completely.

3)  $\frac{1}{x^{-5}}$

4)  $(x^4)^5$

5)  $(x^5)^{-6}$

6)  $3^2 * 3^4$

7)  $\frac{x^{10}}{x^6}$

8)  $\frac{x^2}{x^7}$

9)  $(x^2y^4)^5$

10)  $\left(\frac{x^2}{y^4}\right)^5$

11)  $\left(\frac{x^6}{y^{-3}}\right)^{-7}$

12) Watch this video on rational exponents: <https://youtu.be/e3BitSCBtpY?si=J9bgAf0I8itAMJOn>

Rewrite in exponential form.

13)  $\sqrt[4]{16}$

14)  $\sqrt[3]{x^5}$

Rewrite in radical form.

15)  $5^{\frac{3}{2}}$

16)  $x^{\frac{4}{7}}$

17) In  $\sqrt[n]{a}$ ,  $n$  is called the \_\_\_\_\_ and  $a$  is called the \_\_\_\_\_