

Math 160 - Section R.5 - Converting rational exponents to/from radical expressions

Name _____

THIS SKILL IS VERY IMPORTANT! IT WILL BE USED WHEN FINDING DERIVATIVES.

On 1-10, convert to an exponential expression of the form A^R where R is a rational number exponent.

1) $\sqrt{t^4}$

2) $\sqrt[7]{b^3}$

3) $\sqrt[6]{c^8}$

4) $\sqrt[11]{t^4}$

5) $\frac{1}{\sqrt[3]{a^{11}}}$

6) $\frac{1}{\sqrt[3]{b^9}}$

7) $\frac{1}{\sqrt{s^6}}$

8) $\frac{2}{\sqrt{t^{11}}}$

9) $\frac{1}{\sqrt{x^3 + b}}$

10) $\sqrt{(x + 9)^3}$

14) $\frac{1}{y^{-7/5}}$

15) $r^{-3/13}$

16) $d^{-11/6}$

17) $\frac{1}{s^{1/2}}$

18) $(x^2 - 7)^{-1/2}$

19) $(y^2 - 5)^{1/4}$

On problems 11 - 19, convert to an expression using radical notation and no negative exponents.

11) $x^{1/7}$

12) $b^{2/5}$

13) $t^{14/3}$