Math 2B Name_____ ID: 1

7.4 Rational Exponent Equations

Date_____ Period____

Solve each equation.

1) $5 = p^{\frac{1}{3}}$

2) $243 = r^{\frac{5}{4}}$

3) $343 = k^{\frac{3}{2}}$

4) $v^{\frac{4}{3}} = 625$

5) $p^{\frac{4}{3}} = 81$

6) $m^{\frac{2}{3}} = 25$

7) $a^{-\frac{1}{2}} = \frac{1}{7}$

8) $243 = x^{\frac{5}{3}}$

9) $3125 = x^{\frac{5}{3}}$

10) $125 = x^{\frac{3}{2}}$

11) $n^{\frac{3}{2}} = 27$

12) $r^{\frac{3}{2}} = 729$

13) $343 = (b - 22)^{\frac{3}{2}}$

14) $(x + 15)^{-\frac{4}{3}} = \frac{1}{625}$

15) $247 = 4 + p^{\frac{5}{3}}$

16) $729 = (81m)^{\frac{3}{2}}$

17) $x^{-\frac{5}{3}} - 1 = -\frac{242}{243}$

18) $(12m + 9)^{\frac{3}{2}} = 729$

19) $5 + 5(a + 1)^{\frac{3}{2}} = 140$

20) $2(2x + 7)^{\frac{3}{2}} = 686$