

Name : \_\_\_\_\_ Score : \_\_\_\_\_

Teacher : \_\_\_\_\_ Date : \_\_\_\_\_

---

### Simplifying Rational Exponents

**Simplify. For the answers: only positive exponents with no fractional exponents in the denominator**

1)  $\frac{5n^{\frac{2}{3}} \cdot 125n^{\frac{2}{3}}r^{\frac{2}{3}}}{125r^{\frac{5}{3}}}$

6)  $\left(qz^{\frac{1}{3}} \cdot q \cdot q^{\frac{2}{4}z^7}\right)^7$

2)  $(64s^5)^{1.5}$

7)  $\frac{32k^{\frac{3}{4}}}{2k^{\frac{1}{2}} \cdot 16s^{\frac{3}{2}}k^{\frac{3}{4}}}$

3)  $\frac{144g^2}{12g^{\frac{1}{3}}}$

8)  $(y^{\frac{1}{3}})^2$

4)  $(9x^5)^{\frac{1}{2}}$

9)  $\left(\frac{s^{\frac{5}{3}}x^{\frac{6}{3}}}{xs^{\frac{1}{3}}}\right)^7$

5)  $(q^{\frac{3}{5}})^{-6}$

10)  $(d^{\frac{1}{3}})^{\frac{8}{3}}$

