Secondary II-Unit 2.1 Quad Prep Day 3 Homework Name_____

Exponents

Date_____ Period____

Simplify. Your answer should contain only positive exponents.

1) $2n^{-1} \cdot 3n^{0}$

2) $3k^{2} \cdot 4k^{2}$

3) $4m^{\frac{5}{3}} \cdot 2m^{-\frac{2}{3}} \cdot m^{-\frac{5}{3}}$

4) $2m^{-2} \cdot m^{-1} \cdot 2m^{-\frac{1}{4}}$

5) $\left(3n^{3}\right)^{4}$

6) $\left(2a^{3}\right)^{2}$

7) $\left(k^{-2}\right)^{-\frac{4}{3}}$

8) $\left(m^{-\frac{3}{2}}\right)^{2}$

9) $\dfrac{3n^{4}}{2n}$

10) $\dfrac{3x^{2}}{3x^{-3}}$

11) $\dfrac{2n^{-\frac{1}{2}}}{2n^{\frac{4}{3}}}$

12) $\dfrac{4n^{-\frac{5}{3}}}{4n^{-1}}$

13) $\dfrac{x^{\frac{3}{4}} \cdot \left(7x^{4}\right)^{0}}{3 \cdot (2x)^{0}}$

14) $\dfrac{2a^{-1} \cdot 4a^{2}}{\left((2a)^{\frac{7}{4}}\right)^{0}}$

15) $\dfrac{\left(n^{-1}\right)^{\frac{1}{2}}}{\left(n^{-\frac{5}{3}} n^{2} \cdot n^{\frac{1}{4}}\right)^{\frac{4}{3}}}$

16) $\dfrac{\left(r^{-1}\right)^{\frac{1}{4}}}{r^{2} r^{-\frac{7}{4}}}$

17) $\dfrac{a^{-\frac{5}{4}} \cdot \left(a^{-\frac{3}{4}} a^{-\frac{1}{3}}\right)^{\frac{4}{3}}}{a^{\frac{2}{3}}}$

18) $\dfrac{4a^{\frac{1}{2}}}{\left((5a)^{-1} \cdot 2a^{\frac{5}{4}}\right)^{0}}$

19) $\dfrac{\left(b^{-2}\right)^{\frac{1}{2}}}{b^{\frac{4}{3}} \cdot \left(b^{2}\right)^{\frac{1}{2}}}$

20) $\dfrac{3r^{2} \cdot 2r^{\frac{1}{2}}}{\left(r^{\frac{1}{4}}\right)^{0}}$

21) $\dfrac{b^{-\frac{3}{4}}b^{\frac{4}{3}}}{\left(b^{-\frac{1}{3}}\right)^{\frac{2}{3}}}$

22) $\dfrac{\left(2x^{-\frac{3}{2}}x^{\frac{1}{3}}\right)^{-1}}{2x^{-1}}$

23) $\dfrac{x^{\frac{3}{2}}x^{\frac{1}{2}}}{\left(x^{-\frac{1}{3}}\right)^{-\frac{5}{4}}}$

24) $\dfrac{8n^{0}}{2n \cdot 2n^{-\frac{3}{2}}}$

25) $\dfrac{\left(r^{2}\right)^{-\frac{3}{2}}}{5r \cdot 3r}$

26) $\left(\dfrac{x^{\frac{3}{2}}x^{-\frac{3}{4}}}{x^{\frac{5}{3}}}\right)^{-\frac{3}{2}}$

27) $\left(\dfrac{n^{-\frac{1}{3}}}{n \cdot n}\right)^{-\frac{1}{4}}$

28) $\dfrac{n^{3}n^{-\frac{3}{2}}}{\left(22n^{2}n^{-\frac{3}{2}}\right)^{0}}$

29) $\left(\dfrac{\left(n^{\frac{1}{3}}\right)^{2}}{\left(n^{\frac{3}{2}}\right)^{\frac{1}{2}} \cdot n^{\frac{1}{2}}} \right)^{\frac{7}{4}}$

30) $\dfrac{v^{\frac{1}{4}}}{\left(v^{-2}\right)^{-1} \cdot \left((5v)^{0}\right)^{-\frac{4}{3}}}$

31) $\dfrac{3x^{\frac{1}{3}} \cdot 2x^{\frac{7}{4}}}{\left(x^{\frac{1}{2}}\right)^{-\frac{1}{3}}}$

32) $\dfrac{7x^{-2}}{\left(x^{2}x^{-\frac{1}{2}}\right)^{-\frac{1}{2}}}$