

# Section 1.5 – Chapter Summary

## Problem Set 2

Simplify the following expressions.

1.  $c^5 \cdot c^{12}$

2.  $f^{\delta} - f^{\delta}$

3.  $p^{2/3} p^{7/6}$

4.  $(t^4 \cdot t^{7/6})^{12}$

5.  $\sqrt{104}$

6.  $\left(\frac{p^7 t^{-2}}{pt^{-3}}\right)^{-9}$

7.  $\frac{x^{12}}{x^{15}}$

8.  $(r^5 \cdot r^{-2} \cdot r^{-7})^5$

9.  $n^{-7}$

10.  $\frac{m^6 n^{-2} s^{-10}}{m^{-2} n^2 s^{-4}}$

11.  $\sqrt{700}$

12.  $\frac{-2}{3-2\sqrt{5}}$

13.  $\frac{2}{\sqrt{48}}$

14.  $-2\sqrt{72}$

15.  $\frac{10}{\sqrt{7} + \sqrt{3}}$

16.  $\frac{-6}{\sqrt{75}}$

Replace the fractional exponents with the equivalent “root” expression.

17.  $c^{2/9}$

18.  $e^{12/7}$

19.  $o^{4/5}$

20.  $h^{22/3}$

Replace the “root” expression with the equivalent fractional exponent.

21.  $\sqrt[10]{b^3}$

22.  $\sqrt[20]{y^8}$

22.  $\sqrt[4]{n^{16}}$

24.  $\sqrt{p^{15}}$

Simplify the following expressions.

25.  $a^{8/3} a^{7/3}$

26.  $\sqrt[4]{p^{12}}$

27.  $\frac{\sqrt[5]{g^2} \sqrt[8]{g^4}}{\sqrt[5]{g^3}}$

28.  $\sqrt[8]{x^{10} y^{14} z^{18}}$

29.  $\sqrt{r^4 s^6 t^7} \cdot \sqrt[11]{r^{12} t^{11}}$

30.  $\frac{\sqrt{j}}{\sqrt[4]{k^8 j^9}}$

31.  $\frac{\sqrt[4]{b^9}}{\sqrt[7]{b}}$

32.  $c^{4/3} c^{1/3} - \frac{16c^{7/3}}{2c^{2/3}}$

33.  $\frac{q^{5/3}}{q^{5/12}}$

34.  $\frac{(ab^2)^{1/3}}{(ab^2)^{1/5}}$

35.  $\sqrt[7]{u^3} \sqrt[4]{u}$

36.  $\frac{\sqrt[12]{t^6}}{\sqrt[14]{t^7}}$