King Fahd University of Petroleum & Minerals
Faculty of Science
Math P-Y Quiz # 2

Ahmad Al-zoubi 2/24/2004

Name: Sect. #: ST.ID:

1) Evaluate:

a) $-3^4$

b) $64^{-\frac{1}{2}}$

c) $\left(\frac{9}{16}\right)^{-\frac{3}{2}}$

d) $-3(-2x+x^2)^0$

2) Simplify the following expressions:

a) $(-2x^{-2}y^3)^{-2}(2x^3y^{-1})^{-3}$

b) $\frac{x^{2n}x^{\frac{n}{2}}}{x}$

c) $\sqrt{81x^4y^6}$

d) $5\sqrt[3]{24x^4}-7x\sqrt[3]{81x}$

e) $\frac{2}{\sqrt{2y}}$

f) $\sqrt{\frac{5}{8}}$

g) $\frac{2}{\sqrt[3]{3x^2}}$

h) $\frac{\sqrt{2b}}{\sqrt{2b}-2}$

i) $p^{\frac{2}{3}}(p^{\frac{4}{3}} - 2p^{\frac{1}{3}})$

j) $\sqrt[3]{-81}$

3) Write $3(2x)^{\frac{3}{2}}$ in radical form.

4) Write $\sqrt{\frac{5x^2}{8}}$ in exponential form.

5) Write each number in scientific form:

a) 21100000

b) 0.00000123

6) Write each number in decimal (standard) form:

a) $123 \times 10^{-5}$

b) $123 \times 10^{5}$

**BONUS:**

7) Write $(12 \times 10^{5})(20 \times 10^{-7})$ in scientific form.

8) Simplify:

a) $(27x^6y^2)^{\frac{1}{2}}$

b) $x^{-1} - y^{-2}$