

1. Simplify, leaving your answer in exponent form with only positive exponents. Show work.

a) $(w^7)^2$ Answer: _____

b) w^{-1} Answer: _____

c) $(500)^0$ Answer: _____

d) $c^8 \cdot c^4$ Answer: _____

e) $\frac{a^{-4}}{a^7}$ Answer: _____

f) $\frac{24x^8y^8}{16x^4y^{-3}}$ Answer: _____

g) $8a^9 \cdot 4a^{-17}$ Answer: _____

h) $(3x^6)^2 \cdot (4x^{-8})^2$ Answer: _____

i) $(2x^5y)^3$ Answer: _____

j) $\frac{c^7}{c \cdot (c^2)^2}$ Answer: _____

k) $\left(\frac{2x^2}{3y^{-4}}\right)^4$ Answer: _____

2. Fill in the blanks for each problem.

a) $\sqrt[3]{8} = \underline{\hspace{1cm}}$ because $\underline{\hspace{1cm}} \cdot \underline{\hspace{1cm}} \cdot \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$

b) $\sqrt{49} = \underline{\hspace{1cm}}$ because $\underline{\hspace{1cm}} \cdot \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$

c) $4 = \sqrt[3]{\hspace{1cm}}$

d) $\sqrt[4]{x} = x^{\frac{\square}{\square}}$ (fraction exponent)

3. Evaluate. Show your work. Answers only will not get any credit. (Yes, these are fractional exponents.)

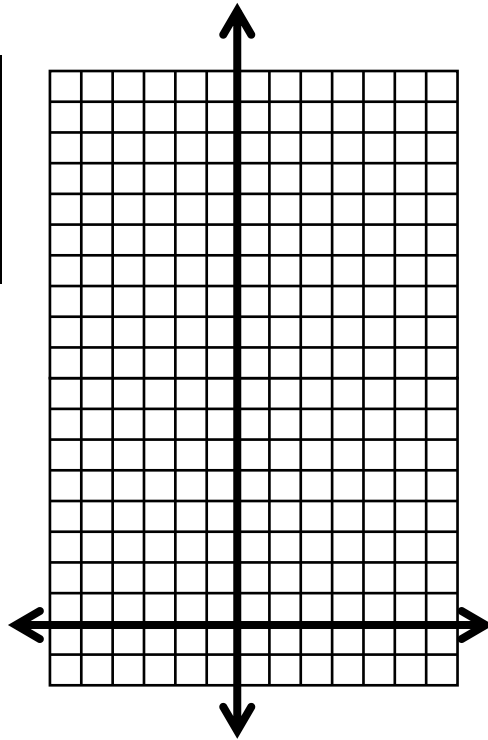
a) $125^{\frac{1}{3}}$ Answer: _____

b) $4^{\frac{3}{2}}$ Answer: _____

c) $8^{\frac{5}{3}}$ Answer: _____

4. Using a chart, graph $y = 2 \cdot \left(\frac{1}{3}\right)^x$

x	y
2	
1	
0	
-1	
-2	



The scale is 1...do NOT change the scale!