

Section 4.6 Focus Exercises

1. Rewrite each expression with a positive exponent. (Remember the *meaning* of the negative exponent.) Evaluate if possible.

a) $8^{-1} =$

b) $3^{-4} =$

c) $11^{-2} =$

d) $x^{-1} =$

e) $y^{-2} =$

f) $w^{-6} =$

2. Rewrite each expression with positive exponents only. (Remember the *meaning* of the negative exponent.) Evaluate if possible.

a) $\left(\frac{3}{5}\right)^{-1} =$

b) $\left(\frac{1}{2}\right)^{-5} =$

c) $\left(\frac{2}{11}\right)^{-2} =$

d) $\left(\frac{b}{c}\right)^{-5} =$

e) $\left(\frac{1}{4m}\right)^{-3} =$

f) $\left(\frac{2x}{w}\right)^{-4} =$

3. Simplify each expression. Be sure to write the result with positive exponents only.

a) $m^4 \cdot m^{-3}$

b) $p^{-7} \cdot p^6$

c) $k^9 \cdot k^{-3}$

d) $h^{-8} \cdot h^{-5}$

e) $\frac{y^1}{y^{-5}}$

f) $\frac{m^{-7}}{m^{-4}}$

g) $\frac{m^{-5}}{m^{-9}}$

h) $\frac{k^{-1}}{k^6}$

i) $(x^{-1})^5$

j) $(m^7)^{-1}$

k) $(h^{-1})^{-8}$

l) $(y^{-4})^{-9}$