

**Question 3.8** Simplify the following. Show one or more steps of work to justify answers. **Write the answers using positive exponents and no parentheses.**

a.  $\frac{a}{a^{-2}}$

b.  $\left(\frac{a}{b}\right)^{-3}$

c.  $\left(\frac{a}{b}\right)^0$

d.  $\left(\frac{a}{a^4}\right)^5$

e.  $(a^{-2}a^3)^{-2}$

f.  $\left(\frac{a^8b^{-5}}{b^{-1}}\right)^3$

**Question 3.9** Suppose the directions stated to write the answers in the form  $a^x$  or  $a^xb^y$ , where  $x$  and  $y$  could be positive or negative. Which answers would change? What would they be?