

### Exit Note: Exponents review

*This counts as a participation grade. Answer in the space provided.*

Simplify, leaving no negative or fractional exponents.

1.  $3x^{-2}y \times 3x^3y^{-1}$

2.  $\sqrt[2]{a^6b^{-10}}$

3.  $x^{\frac{1}{5}} \times \left(\frac{x^4}{z^{10}}\right)^{\frac{1}{5}}$

4.  $\log_5 25$

5. Let  $f(x) = 3x + 4$  and  $g(x) = (x - 5)^2$

(a) Find  $(g \circ f)(x)$

(b) Find  $f^{-1}(x)$