

# Powers of Exponents (A)

Simplify each expression.

1.  $((-5)^{-2})^5$

2.  $((-6)^{-1})^{-6}$

3.  $(8^8)^1$

4.  $((-6)^{-3})^4$

5.  $(4^7)^{-7}$

6.  $(8^{-6})^{-2}$

7.  $((-9)^{-4})^{-6}$

8.  $((-6)^9)^{-1}$

9.  $(2^{-5})^{-4}$

10.  $((-9)^3)^{-5}$

# Powers of Exponents (A) Answers

Simplify each expression.

1.  $((-5)^{-2})^5$

$$= (-5)^{-10} = \frac{1}{(-5)^{10}}$$

2.  $((-6)^{-1})^{-6}$

$$= (-6)^6$$

3.  $(8^8)^1$

$$= 8^8$$

4.  $((-6)^{-3})^4$

$$= (-6)^{-12} = \frac{1}{(-6)^{12}}$$

5.  $(4^7)^{-7}$

$$= 4^{-49} = \frac{1}{4^{49}}$$

6.  $(8^{-6})^{-2}$

$$= 8^{12}$$

7.  $((-9)^{-4})^{-6}$

$$= (-9)^{24}$$

8.  $((-6)^9)^{-1}$

$$= (-6)^{-9} = \frac{1}{(-6)^9}$$

9.  $(2^{-5})^{-4}$

$$= 2^{20}$$

10.  $((-9)^3)^{-5}$

$$= (-9)^{-15} = \frac{1}{(-9)^{15}}$$