## **Powers with Negative Exponents**

- 1. Fill in the blanks to complete each statement:
  - **a.** In the expression  $2^{-3}$ , the base is 2, and the exponent is \_\_\_\_\_\_.
  - **b.** A negative exponent indicates that the base should be taken as the reciprocal, so  $2^{-3}$  is equal to \_\_\_\_\_\_.
  - **c.** If  $5^{-2}$  is the same as \_\_\_\_\_.
  - **d.** To simplify 6<sup>-2</sup>, you can write it as \_\_\_\_\_.
  - **e.** When a number is raised to a negative exponent, it becomes the \_\_\_\_\_\_of that number.
- 2. Indicate whether each statement is true (T) or false (F):
  - **a.**  $2^{-3}$  is the same as  $1/2^{3}$ .
  - **b.** Negative exponents make numbers smaller.
  - **c.**  $5^{-1}$  is equal to 5.
  - **d.**  $3^{-2}$  is equal to 1/9.
- 3. Match each expression on the left with its simplified form on the right:

	Column A	Column B
i.	2 <sup>-3</sup>	A. 1/3
ii.	5 <sup>-2</sup>	B. 1/64
iii.	3 <sup>-1</sup>	C. 1/8
iv.	4 <sup>-3</sup>	D. 1/36
V.	6 <sup>-2</sup>	E. 1/25