Powers of 10

Name: _____ Date: _____

Part A: Complete the Pattern

Fill in the missing numbers to show the pattern of powers of 10.

$10^1 = 10$

$10^2 = 10 \times 10 =$ _____

$10^3 = 10 \times 10 \times 10 =$ _____

$10^4 =$ _____ × _____ × _____ × _____ = _____

$10^5 =$ _____

$10^6 =$ _____

Part B: Write as Powers of 10

Express each number using powers of 10.

a) 100 = _____

b) 1,000 = _____

c) 10,000 = _____

d) 100,000 = _____

e) 1,000,000 = _____

f) 10,000,000 = _____

Part C: Write in Standard Form

Write the number that each power of 10 represents.

a) 10^3 = _____

b) 10^7 = _____

c) 10^4 = _____

d) 10^2 = _____

e) 10^5 = _____

f) 10^8 = _____

Part D: Pattern Challenge

1. How many zeros does 10^6 have? _____

2. What pattern do you notice between the exponent (power) and the number of zeros?

   _____

3. Complete: 10^9 has _____ zeros.

4. A number with 12 zeros would be written as 10 to the power of _____