1. Evaluate each power.

a) 40 b)230 c)(–6)0

d) 10 e) –10 f)(–1)0

2. Write each number as a power of 10.

a) 10 000 b) 1 000 000 c)one billion

d) ten e) 1

3. Use powers of 10 to write each number.

a) 700 000 000 000 b) 7000

c) 77 077 d) 7 000 007

4. Write each number in standard form.

a) (8 × 105)

b) (9 × 107) + (9 × 106) + (5 × 105)

c) (2 × 103) + (2 × 102) + (6 × 100)

d) (5 × 105) + (4 × 108) + (8 × 100) + (3 × 104)

5. Write these numbers in standard form, then order them from least to greatest.
fifty-five hundred 50 500 (5 × 106) + (5 × 100)
five hundred thousand 5 × 104 500 500

6. a) Complete this table for a base of 10.

|  |  |  |
| --- | --- | --- |
| Exponent | Power | Standard Form |
| 6 | 106 |  |
| 5 |  |  |
| 4 |  |  |
| 3 |  |  |
| 2 |  |  |
| 1 |  |  |
| 0 |  |  |

b) Use patterns to describe why the power with an exponent of 0 is equal to 1.