Learning Outcomes Covered:

2B: I can evaluate a power with a base of 10.

CONTENT Assessment Questions:

1. Evaluate each power.
   a) 4^0 b) $(-6)^0$ c) 1^0 d) -1^0

   $= 1$ $= 1$ $= 1$ $= -1$

2. Write each number as a power of 10.
   a) 1000   b) 1 000 000   c) one billion

   $= 10^3$ $= 10^6$ $= 10^9$

3. Use powers of 10 to write each number.
   a) 1235   b)   7002   c)   7 070 007

   $1 \times 10^3 + 2 \times 10^2$ $= 7 \times 10^3 + 2 \times 10^0$ $= 7 \times 10^6 + 7 \times 10^4 + 7 \times 10^0$
   $+ 3 \times 10^1 + 5 \times 10^0$

4. Write each number in standard form.
   a) $(2 \times 10^3) + (2 \times 10^2) + (6 \times 10^0)$ b) $(5 \times 10^5) + (4 \times 10^8) + (8 \times 10^0) + (3 \times 10^4)$

   $= 2206$ $= 400,530,008$

CURRICULAR COMPETENCIES Questions:

1. a) Complete this table for a base of 10.   (RA)

Exponent	Power	Standard Form
6	10^6	1,000,000
5	10^5	100,000
4	10^4	10,000
3	10^3	1,000
2	10^2	100
1	10^1	10
0	10^0	1

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

   As you go down the table, you divide the number
   by 10. So $10 \div 10 = 1$

2. Using the 6 numbers: (US, CmRp)

① fifty-five hundred   ③ 50 500   ⑤ $(5 \times 10^6) + (5 \times 10^0)$
② five hundred thousand   ④ 5×10^4 ⑥ 500 500

a) Order them from least to greatest. Show all work and explain how you did this.

① $5,500$

② $500,000$

③ $50,500$

④ $50,000$

⑤ $5,000,005$

⑥ $500,500.$

$① < ④ < ③ < ② < ⑥ < ⑤$

b) Can you think of other ways to order these numbers from least to greatest? Explain.

I can rewrite all of them in powers of 10.
the one with greatest exponent would be greatest.
If exponents are the same, then we can compare
the digits.

ex. $5 \times 10^4 + 5 \times 10^2$ ← this would be bigger
      $5 \times 10^4 + 3 \times 10^2$ because $5 > 3$

ONGOING LEARNING ACTIVITIES:

CORE: Page 61: Curricular Competencies: 11, 12, 13, 14
                Content: (4 to 10) Do at least 2 from each question
ADVANCED: Page 62:15