

Section 2.2

Powers of 10 and the Zero Exponent

Complete the following tables:

Power	Repeated Multiplication	Standard Form
3^4		
3^3		
3^2		
3^1		
3^0		

Power	Repeated Multiplication	Standard Form
2^4		
2^3		
2^2		
2^1		
2^0		

Power	Repeated Multiplication	Standard Form
10^4		
10^3		
10^2		
10^1		
10^0		

Zero Exponent Law

↳ Any base (other than 0) with an exponent 0 is equal to one.

$$n^0 = 1, n \neq 0$$

Example 1: Evaluate.

a) $(560)^0$

b) $(3 + 4)^0$

Example 2: Evaluate. Watch your order of operations!!

a) $3 + 2^0$

b) $3^0 + 2^0$

c) $(3 + 2 \times 4)^0$

d) $-(3 + 2)^0$

e) $-3^0 + 5$

f) $-3^0 + (-2)^0$

Example 3: Write as a power of 10.

a) 10

b) 100

c) 1000

d) 10000

e) one million

f) ten million

Did you notice any patterns?

Work Sample Questions p. 61: # 4ad, 5ac, 6ac, 8ace	Extra Practice Questions p. 61: #4bc, 5bd, 6bde, 8bdf
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