

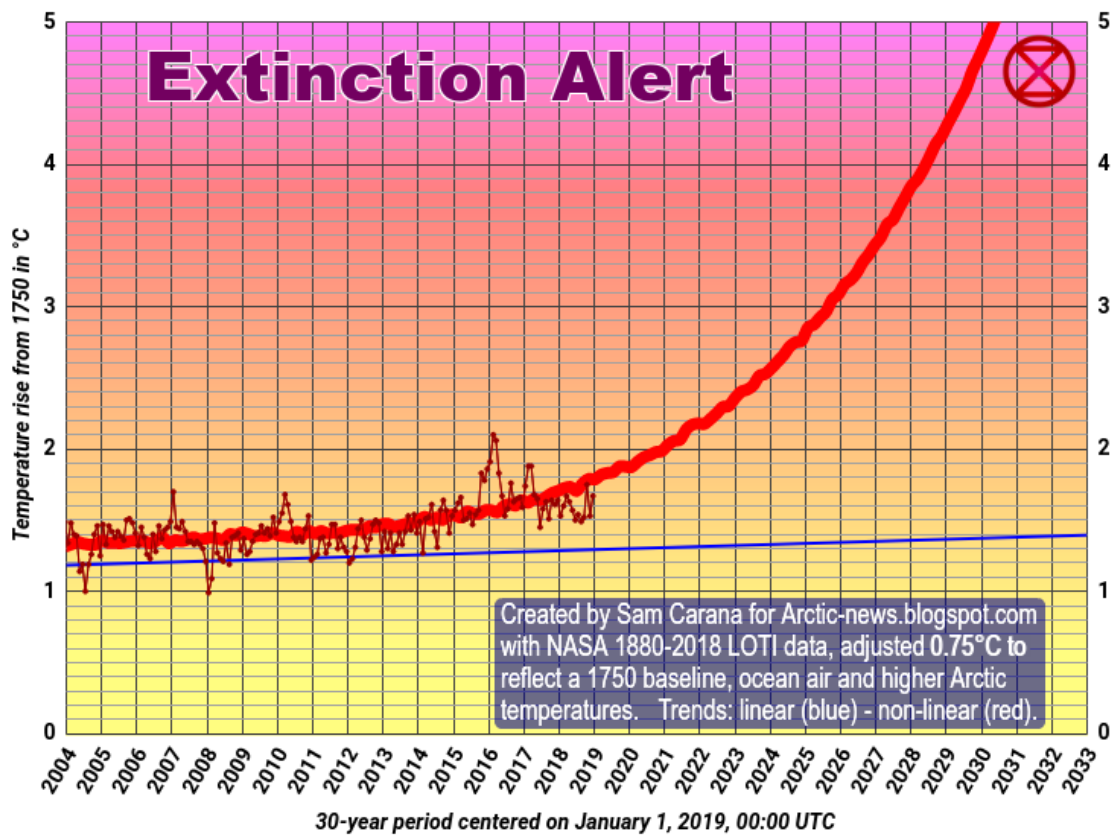
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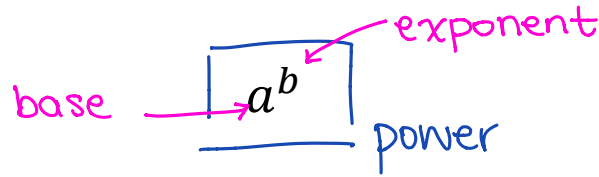
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<p>Learning Goal 2.1</p>	<p>I can identify the base and exponent of a power and understand the relationship between powers and repeated multiplication.</p>
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Exponents are used in a lot of mathematical models

- bacterial growth
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Example Evaluate the following powers.

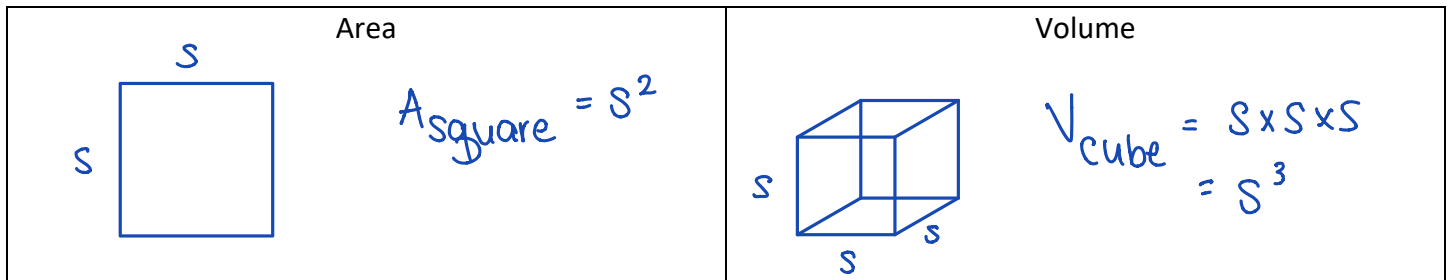
a. 4^3
 $= 4 \times 4 \times 4$
 $= 64$

b. 8^2
 $= 8 \times 8$
 $= 64$

c. 3^3
 $= 3 \times 3 \times 3$
 $= 27$

d. 2^5
 $= 2 \times 2 \times 2 \times 2 \times 2$
 $= 32$

Some simpler models:



Example Consider the order of operations of the following examples.

a. 2^4
 $= 16$

b. $(-2)^4$
 $= \underbrace{(-2)(-2)} \underbrace{(-2)(-2)}$
 $= 16$

c. $-(-2)^4$

$= -\underbrace{(-2)(-2)} \underbrace{(-2)(-2)}$
 $= -16$

d. -2^4
 $= -2 \times 2 \times 2 \times 2$
 $= -16$

2^3 vs $(-2)^3$ vs $-2^3 = -2 \times 2 \times 2 = -8$

$(+2)(+2)(-2) = -8$