We have the following definition for negative exponents. If a is any non-zero number and n is a positive integer (yes, positive) then,

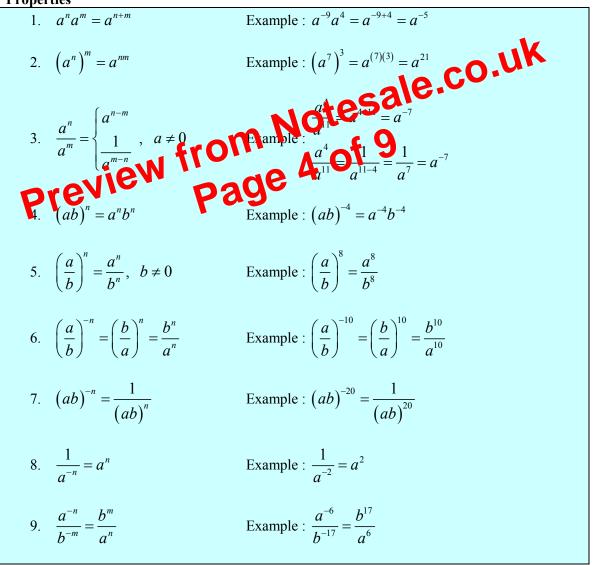
$$a^{-n} = \frac{1}{a^n}$$

Can you see why we required that *a* not be zero? Remember that division by zero is not defined and if we had allowed *a* to be zero we would have gotten division by zero. Here are a couple of quick examples for this definition,

$$5^{-2} = \frac{1}{5^2} = \frac{1}{25} \qquad (-4)^{-3} = \frac{1}{(-4)^3} = \frac{1}{-64} = -\frac{1}{64}$$

Here are some of the main properties of integer exponents. Accompanying each property will be a quick example to illustrate its use. We will be looking at more complicated examples after the properties.

Properties



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