**Formulas on the Technician Exam**

This page contains all the formulas needed for the Technician class ham radio license exam.  You might want to print out these formulas and review them just before entering the exam room, but leave this sheet in the car!  *Do* ***not*** *bring it into the exam room with you!*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| International System of Units (SI) | | | | |
| **Prefix name** | **Prefix symbol** | **Value** | | |
| giga- | G | 109 | 1,000,000,000 | one billion |
| mega- | M | 106 | 1,000,000 | one million |
| kilo- | k | 103 | 1,000 | one thousand |
| (none) | (none) | 100 | 1 | one |
| centi- | c | 10−2 | .01 | one one-hundredth |
| milli- | m | 10−3 | .001 | one one-thousandth |
| micro- | µ | 10−6 | .000001 | one one-millionth |
| nano- | n | 10−9 | .000000001 | one one-billionth |
| pico- | p | 10−12 | .000000000001 | one one-trillionth |

1 A=1000 mA

1 mA=10−3 A

1 mW=10−3 W

1 pF=10−6 *μ*F

1 Hz=10−3 kHz

1 Hz=10−6 MHz

1 Hz=10−9 GHz

1 kHz=10−3 MHz

1 MHz=103 kHz

1 MHz=10−3 GHz

**Length of 1/2 wavelength antenna:**

*Length* (in feet)=468*Frequency* (in MHz)

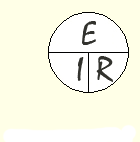
**Length of 1/4 wavelength antenna:**

*Length* (in feet)=234*Frequency* (in MHz)

**Feet to inches:**

*Length* (in inches)=*Length* (in feet)×12

**Ohm's law:**

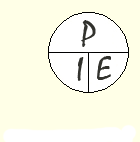


*E*=*I*×*R*

*I*=*ER*

*R*=*EI*

**Power formulas:**



*P*=*E*×*I*

*I*=*PE*