**7th Grade Formulas Students Might Need to Know for the EOG**

**GEOMETRY FORMULAS**

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| --- | --- |
| ***Name of Formula*** | ***Formula*** |
| Perimeter of a Rectangle | P = 2L + 2W |
| Circumference of a Circle | C = 2πr or C = πd |
| Area of a Triangle | A = ½ bh |
| Area of a Trapezoid | A = ½ h (base1 + base2) |
| Area of a Circle | A = πr2 |
| Area of a Rectangle | A = lw |
| Surface Area of a Rectangular Prism | SA = 2lw + 2lh + 2wh |
| Surface Area of a Cube | SA = 6s2 |
| Surface Area- other prisms and pyramids | Add the area of all faces |
| Volume of a Rectangular Prism | V = lwh |
| Volume of Triangular Prism | V = ½ lwh |
| Volume – other prisms | V = Bh (Big B = area of the base) |
| Volume of Square Pyramid | V = $\frac{1}{3}$ lwh |
| Volume of other Pyramids | V = $\frac{1}{3}$ Bh (Big B = area of the base) |

**Simple Interest: I = P x r x t**

I= Interest P= Principle r = rate (%) t = time (years)

**Distance: D = r x t** D= Distance r= rate t= time

**Percent Proportion**:

$$\frac{\%}{100}=\frac{part}{whole}=\frac{is}{of}$$

**Percent of Change**:

$$\frac{\% of Change}{100}=\frac{amount of change}{original}$$

**Percent Error**

$$\frac{\% error}{100}= \frac{difference between actual and expected amount}{actual amount}$$

**Mean Absolute Deviation (MAD):**

Find the mean of the data set, subtract the mean from each piece of data, find the absolute value of the differences and then find the mean of the absolute value of the differences.

\*Created by WCPSS teachers based on the Common Core Standards