

# Oklahoma State Testing Program

## 8<sup>th</sup> Grade Mathematics Formula Sheet

### UNIT CONVERSIONS

1 foot = 12 inches

1 yard = 3 feet

1 mile = 5280 feet

1 mile = 1760 yards

1 meter = 100 centimeters

1 meter = 1000 millimeters

1 pound = 16 ounces

1 ton = 2000 pounds

1 kilogram = 1000 grams

1 cup = 8 fluid ounces

1 pint = 2 cups

1 quart = 2 pints

1 gallon = 4 quarts

### AREA

Square

$$A = s^2$$

Parallelogram

$$A = bh$$

Rectangle

$$A = lw$$

Circle

$$A = \pi r^2$$

Triangle

$$A = \frac{1}{2}bh$$

Trapezoid

$$A = \frac{1}{2}(b_1 + b_2)h$$

### CIRCUMFERENCE

Circle

$$C = \pi d \text{ or } C = 2\pi r$$

### VOLUME

Rectangular Prism

$$V = Bh \text{ or } V = lwh$$

Right Cylinder

$$V = Bh \text{ or } V = \pi r^2 h$$

### SURFACE AREA

Rectangular Prism

$$S = 2B + Ph \text{ or } S = 2lw + 2lh + 2wh$$

Cylinder

$$S = 2\pi rh + 2\pi r^2$$

### LINEAR EQUATIONS

Slope-intercept

$$y = mx + b$$

Direct Variation

$$y = kx \text{ or } k = \frac{y}{x}$$

Slope formula

$$m = \frac{y_2 - y_1}{x_2 - x_1}$$

( $k$ : constant of proportionality)

### OTHER

$$d = rt$$

Pythagorean Theorem

$$a^2 + b^2 = c^2$$



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