

**Oklahoma State Testing Program**  
**8<sup>th</sup> Grade Mathematics Formula Sheet**

**UNIT CONVERSIONS**

1 foot = 12 inches

1 pound = 16 ounces

1 cup = 8 fluid ounces

1 yard = 3 feet

1 ton = 2000 pounds

1 pint = 2 cups

1 mile = 5280 feet

1 kilogram = 1000 grams

1 quart = 2 pints

1 mile = 1760 yards

1 gallon = 4 quarts

1 meter = 100 centimeters

1 meter = 1000 millimeters

**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

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

**VOLUME**

Rectangular Prism

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

Right Cylinder

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

**SURFACE AREA**

Rectangular Prism

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

Cylinder

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

**LINEAR EQUATIONS**

Slope-intercept

$$y = mx + b$$

Direct Variation

$$y = kx$$

Slope formula

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

**OTHER**

$$d = rt$$

$$\text{Pythagorean Theorem} \quad a^2 + b^2 = c^2$$

