The background is a vibrant collage of various mathematical symbols and equations in different colors. It includes long division problems like $25 \overline{) 5}$ and $87 \overline{) 54}$, multiplication and addition problems like $32 \times 13 = 96$ and $78 + 14 = 92$, fractions like $\frac{3}{7}$ and $\frac{1}{6}$, geometric shapes like triangles and rectangles, and various mathematical notations like π , ∞ , and $\%.$

8th Grade Mathematics *Reference Sheet*



8th Grade Mathematics Reference Sheet

GEOMETRIC FORMULAS

Perimeter of rectangle

$$2l + 2w = P$$



Perimeter of square

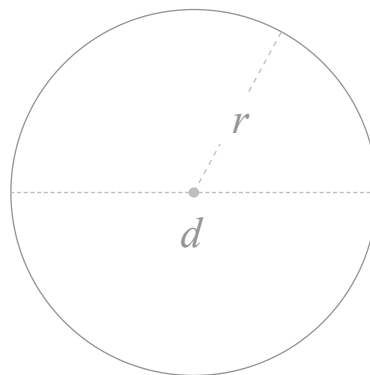
$$4s = P$$



Circumference of circle

$$2\pi r = C$$

$$\pi d = C$$



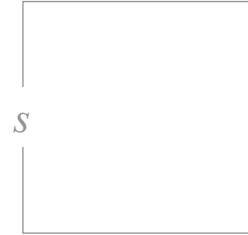
Area of rectangle

$$lw = A$$



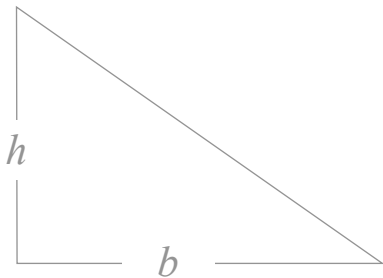
Area of square

$$s^2 = A$$



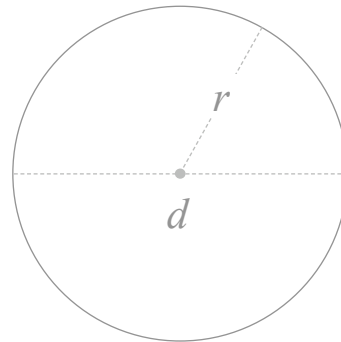
Area of triangle

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



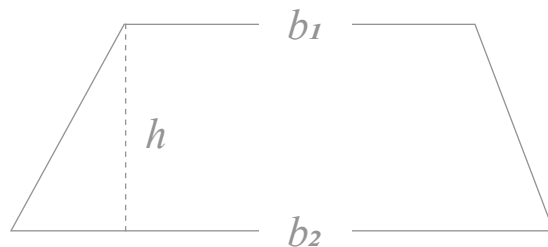
Area of circle

$$\pi r^2 = A$$



Area of trapezoid

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



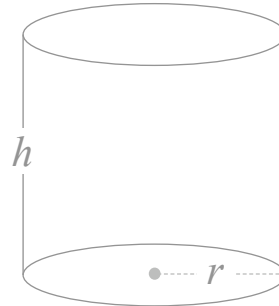
Surface Area of
rectangular prism

$$2B + Ph = SA$$



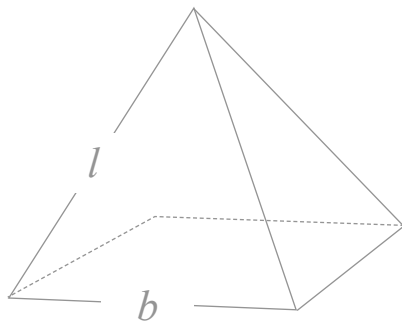
Surface Area of right cylinder

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



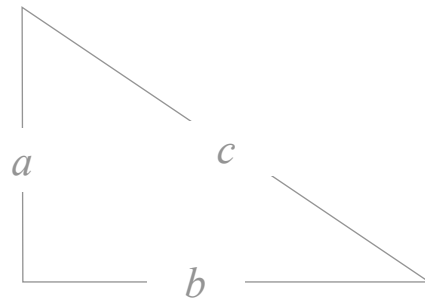
Surface Area of right pyramid

$$\frac{1}{2} l P + 2B = SA$$



Pythagorean Theorem

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



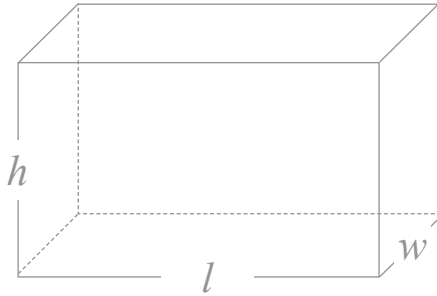
To calculate distance traveled

$$d = rt$$

DISTANCE = RATE x TIME

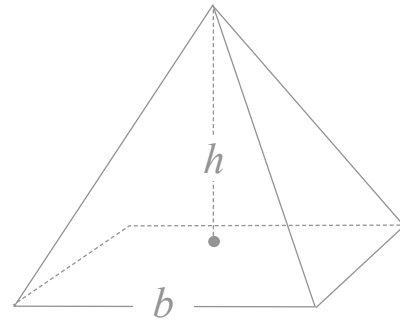
Volume of rectangular prism

$$lwh = V$$



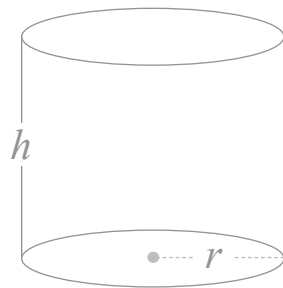
Volume of right pyramid

$$\frac{1}{3}Bh = V$$



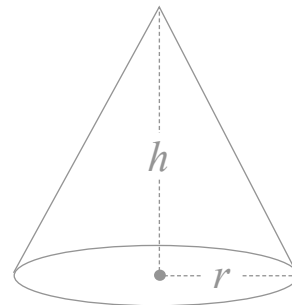
Volume of right cylinder

$$\pi r^2 h = V$$



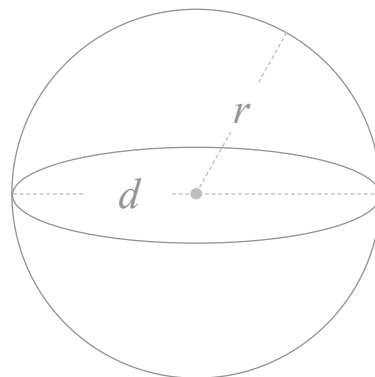
Volume of cone

$$\frac{1}{3}\pi r^2 h = V$$



Volume of sphere

$$\frac{4}{3}\pi r^3 = V$$



8th Grade Mathematics Reference Sheet

CONVERSION FACTORS

UNITS

12 inches = 1 foot

3 feet = 1 yard

5,280 feet = 1 mile

8 fl oz = 1 cup

2 cups = 1 pint

2 pints = 1 quart

4 quarts = 1 gallon

16 oz = 1 pound

2,000 pounds = 1 ton

UNITS OF TIME

60 seconds = 1 minute

60 minutes = 1 hour

24 hours = 1 day

7 days = 1 week

52 weeks = 1 year = 365 days

METRIC CONVERSIONS

10 millimeters = 1 centimeter

10 milliliters = 1 centiliter

10 milligrams = 1 centigram

100 centimeters = 1 meter

100 centiliters = 1 liter

100 centigrams = 1 gram

1,000 meters = 1 kilometer

1,000 liters = 1 kiloliter

1,000 grams = 1 kilogram