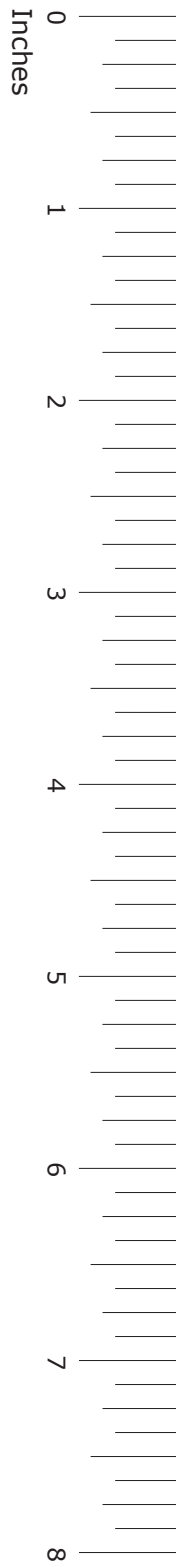
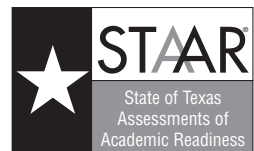


STAAR GRADE 7 MATHEMATICS REFERENCE MATERIALS



LINEAR EQUATIONS

Slope-intercept form

$$y = mx + b$$

Constant of proportionality

$$k = \frac{y}{x}$$

CIRCUMFERENCE

Circle

$$C = 2\pi r$$

or

$$C = \pi d$$

AREA

Triangle

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

Rectangle or parallelogram

$$A = bh$$

Trapezoid

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

Circle

$$A = \pi r^2$$

VOLUME

Prism

$$V = Bh$$

Pyramid

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

ADDITIONAL INFORMATION

Pi

$$\pi \approx 3.14$$

or

$$\pi \approx \frac{22}{7}$$

Distance

$$d = rt$$

Simple interest

$$I = Prt$$

Compound interest

$$A = P(1 + r)^t$$

STAAR GRADE 7 MATHEMATICS REFERENCE MATERIALS

LENGTH

Customary

1 mile (mi) = 1,760 yards (yd)

1 yard (yd) = 3 feet (ft)

1 foot (ft) = 12 inches (in.)

Metric

1 kilometer (km) = 1,000 meters (m)

1 meter (m) = 100 centimeters (cm)

1 centimeter (cm) = 10 millimeters (mm)

VOLUME AND CAPACITY

Customary

1 gallon (gal) = 4 quarts (qt)

1 quart (qt) = 2 pints (pt)

1 pint (pt) = 2 cups (c)

1 cup (c) = 8 fluid ounces (fl oz)

Metric

1 liter (L) = 1,000 milliliters (mL)

WEIGHT AND MASS

Customary

1 ton (T) = 2,000 pounds (lb)

1 pound (lb) = 16 ounces (oz)

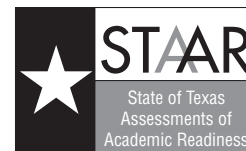
Metric

1 kilogram (kg) = 1,000 grams (g)

1 gram (g) = 1,000 milligrams (mg)



STAAR GRADE 8 MATHEMATICS REFERENCE MATERIALS



LINEAR EQUATIONS

Slope-intercept form $y = mx + b$

Direct variation $y = kx$

Slope of a line $m = \frac{y_2 - y_1}{x_2 - x_1}$

CIRCUMFERENCE

Circle $C = 2\pi r$ or $C = \pi d$

AREA

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

Rectangle or parallelogram $A = bh$

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

Circle $A = \pi r^2$

SURFACE AREA

	Lateral	Total
Prism	$S = Ph$	$S = Ph + 2B$

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

VOLUME

Prism or cylinder $V = Bh$

Pyramid or cone $V = \frac{1}{3}Bh$

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

ADDITIONAL INFORMATION

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

Simple interest $I = Prt$

Compound interest $A = P(1 + r)^t$

