

# TAKS Mathematics Charts

## 3<sup>rd</sup> Grade

### LENGTH

Metric	Customary
1 meter = 100 centimeters	1 yard = 3 feet
1 centimeter = 10 millimeters	1 foot = 12 inches

### TIME

1 year = 365 days
1 year = 12 months
1 year = 52 weeks
1 week = 7 days
1 day = 24 hours
1 hour = 60 minutes
1 minute = 60 seconds



**4<sup>th</sup> Grade****LENGTH****Metric**

1 kilometer = 1000 meters  
1 meter = 100 centimeters  
1 centimeter = 10 millimeters

**Customary**

1 mile = 1760 yards  
1 mile = 5280 feet  
1 yard = 3 feet  
1 foot = 12 inches

**CAPACITY AND VOLUME****Metric**

1 liter = 1000 milliliters

**Customary**

1 gallon = 4 quarts  
1 gallon = 128 ounces  
1 quart = 2 pints  
1 pint = 2 cups  
1 cup = 8 ounces

**MASS AND WEIGHT****Metric**

1 kilogram = 1000 grams  
1 gram = 1000 milligrams

**Customary**

1 ton = 2000 pounds  
1 pound = 16 ounces

**TIME**

1 year = 365 days  
1 year = 12 months  
1 year = 52 weeks  
1 week = 7 days  
1 day = 24 hours  
1 hour = 60 minutes  
1 minute = 60 seconds

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<b>Perimeter</b>	square	$P = 4s$
	rectangle	$P = 2l + 2w$ or $P = 2(l + w)$
<b>Area</b>	rectangle	$A = lw$ or $A = bh$

**5<sup>th</sup> Grade****LENGTH****Metric**

1 kilometer = 1000 meters

1 meter = 100 centimeters

1 centimeter = 10 millimeters

**Customary**

1 mile = 1760 yards

1 mile = 5280 feet

1 yard = 3 feet

1 foot = 12 inches

**CAPACITY AND VOLUME****Metric**

1 liter = 1000 milliliters

**Customary**

1 gallon = 4 quarts

1 gallon = 128 ounces

1 quart = 2 pints

1 pint = 2 cups

1 cup = 8 ounces

**MASS AND WEIGHT****Metric**

1 kilogram = 1000 grams

1 gram = 1000 milligrams

**Customary**

1 ton = 2000 pounds

1 pound = 16 ounces

**TIME**

1 year = 365 days

1 year = 12 months

1 year = 52 weeks

1 week = 7 days

1 day = 24 hours

1 hour = 60 minutes

1 minute = 60 seconds

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<b>Perimeter</b>	square	$P = 4s$
	rectangle	$P = 2l + 2w$ or $P = 2(l + w)$
<b>Area</b>	square	$A = s^2$
	rectangle	$A = lw$ or $A = bh$
	triangle	$A = \frac{1}{2}bh$ or $A = \frac{bh}{2}$

**6<sup>th</sup> Grade****LENGTH**

<b>Metric</b>	<b>Customary</b>
1 kilometer = 1000 meters	1 mile = 1760 yards
1 meter = 100 centimeters	1 mile = 5280 feet
1 centimeter = 10 millimeters	1 yard = 3 feet
	1 foot = 12 inches

**CAPACITY AND VOLUME**

<b>Metric</b>	<b>Customary</b>
1 liter = 1000 milliliters	1 gallon = 4 quarts
	1 gallon = 128 ounces
	1 quart = 2 pints
	1 pint = 2 cups
	1 cup = 8 ounces

**MASS AND WEIGHT**

<b>Metric</b>	<b>Customary</b>
1 kilogram = 1000 grams	1 ton = 2000 pounds
1 gram = 1000 milligrams	1 pound = 16 ounces

**TIME**

1 year = 365 days
1 year = 12 months
1 year = 52 weeks
1 week = 7 days
1 day = 24 hours
1 hour = 60 minutes
1 minute = 60 seconds

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<b>Perimeter</b>	square	$P = 4s$
	rectangle	$P = 2l + 2w$ or $P = 2(l + w)$
<b>Circumference</b>	circle	$C = 2\pi r$ or $C = \pi d$
<b>Area</b>	square	$A = s^2$
	rectangle	$A = lw$ or $A = bh$
	triangle	$A = \frac{1}{2}bh$ or $A = \frac{bh}{2}$
	trapezoid	$A = \frac{1}{2}(b_1 + b_2)h$ or $A = \frac{(b_1 + b_2)h}{2}$
	circle	$A = \pi r^2$
<b>Volume</b>	cube	$V = s^3$
	rectangular prism	$V = lwh$
<b>Pi</b>	$\pi$	$\pi \approx 3.14$ or $\pi \approx \frac{22}{7}$

**7<sup>th</sup> Grade****LENGTH**

<b>Metric</b>	<b>Customary</b>
1 kilometer = 1000 meters	1 mile = 1760 yards
1 meter = 100 centimeters	1 mile = 5280 feet
1 centimeter = 10 millimeters	1 yard = 3 feet
	1 foot = 12 inches

**CAPACITY AND VOLUME**

<b>Metric</b>	<b>Customary</b>
1 liter = 1000 milliliters	1 gallon = 4 quarts
	1 gallon = 128 ounces
	1 quart = 2 pints
	1 pint = 2 cups
	1 cup = 8 ounces

**MASS AND WEIGHT**

<b>Metric</b>	<b>Customary</b>
1 kilogram = 1000 grams	1 ton = 2000 pounds
1 gram = 1000 milligrams	1 pound = 16 ounces

**TIME**

1 year = 365 days
1 year = 12 months
1 year = 52 weeks
1 week = 7 days
1 day = 24 hours
1 hour = 60 minutes
1 minute = 60 seconds

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<b>Perimeter</b>	square	$P = 4s$
	rectangle	$P = 2l + 2w$ or $P = 2(l + w)$
<b>Circumference</b>	circle	$C = 2\pi r$ or $C = \pi d$
<b>Area</b>	square	$A = s^2$
	rectangle	$A = lw$ or $A = bh$
	triangle	$A = \frac{1}{2}bh$ or $A = \frac{bh}{2}$
	trapezoid	$A = \frac{1}{2}(b_1 + b_2)h$ or $A = \frac{(b_1 + b_2)h}{2}$
	circle	$A = \pi r^2$
<b>Volume</b>	cube	$V = s^3$
	rectangular prism	$V = lwh$ or $V = Bh^*$
	cylinder	$V = \pi r^2h$ or $V = Bh^*$
<i>*B represents the area of the Base of a solid figure.</i>		
<b>Pi</b>	$\pi$	$\pi \approx 3.14$ or $\pi \approx \frac{22}{7}$

**8<sup>th</sup> Grade****LENGTH****Metric**

1 kilometer = 1000 meters

1 meter = 100 centimeters

1 centimeter = 10 millimeters

**Customary**

1 mile = 1760 yards

1 mile = 5280 feet

1 yard = 3 feet

1 foot = 12 inches

**CAPACITY AND VOLUME****Metric**

1 liter = 1000 milliliters

**Customary**

1 gallon = 4 quarts

1 gallon = 128 ounces

1 quart = 2 pints

1 pint = 2 cups

1 cup = 8 ounces

**MASS AND WEIGHT****Metric**

1 kilogram = 1000 grams

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**Customary**

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**TIME**

1 year = 365 days

1 year = 12 months

1 year = 52 weeks

1 week = 7 days

1 day = 24 hours

1 hour = 60 minutes

1 minute = 60 seconds

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<b>Perimeter</b>	square	$P = 4s$
	rectangle	$P = 2l + 2w$ or $P = 2(l + w)$
<b>Circumference</b>	circle	$C = 2\pi r$ or $C = \pi d$
<b>Area</b>	square	$A = s^2$
	rectangle	$A = lw$ or $A = bh$
	triangle	$A = \frac{1}{2}bh$ or $A = \frac{bh}{2}$
	trapezoid	$A = \frac{1}{2}(b_1 + b_2)h$ or $A = \frac{(b_1 + b_2)h}{2}$
	circle	$A = \pi r^2$
<b>Surface Area</b>	cube	$S = 6s^2$
	cylinder (lateral)	$S = 2\pi rh$
	cylinder (total)	$S = 2\pi rh + 2\pi r^2$ or $S = 2\pi r(h + r)$
	cone (lateral)	$S = \pi rl$
	cone (total)	$S = \pi rl + \pi r^2$ or $S = \pi r(l + r)$
	sphere	$S = 4\pi r^2$
<b>Volume</b>	prism	$V = Bh^*$
	cylinder	$V = Bh^*$
	pyramid	$V = \frac{1}{3}Bh^*$
	cone	$V = \frac{1}{3}Bh^*$
	sphere	$V = \frac{4}{3}\pi r^3$
<i>*B represents the area of the Base of a solid figure.</i>		
<b>Pi</b>	$\pi$	$\pi \approx 3.14$ or $\pi \approx \frac{22}{7}$
<b>Pythagorean Theorem</b>		$a^2 + b^2 = c^2$
<b>Simple Interest Formula</b>		$I = prt$