

# Springfield Public Schools Performance Series Guidelines Mathematics Assessment

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## Calculators: (grades 3-5: no / grades 6-8: yes)

District guidelines do not allow calculators to be used at elementary grade levels (grades 3, 4, and 5), however, scratch paper should be allowed during the mathematics assessment in Performance Series.



District guidelines require teachers to allow middle school students (grades 6, 7, and 8) to use calculators during the mathematics assessment in Performance Series.

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
## Mathematics Reference Sheet: (grades 3-7: no / grade 8: yes)

District guidelines allow 8<sup>th</sup> grade students to use the mathematics reference sheet, posted on the Missouri Department of Elementary and Secondary Education's website, during the mathematics assessment in Performance Series.

**Mathematics Reference Sheet**

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**Formulas**

Square Area = $s^2$	Right Triangular Prism Volume = $\frac{1}{2}bhL$	
Triangle Area = $\frac{1}{2}bh$	Rectangular Solid Volume = $lwh$ Surface Area = $2(lw + lh + wh)$	
Rectangle Area = $lw$ Perimeter = $2l + 2w$	Right Cylinder Volume = $\pi r^2h$ Surface Area = $2\pi r^2 + 2\pi rh$	
Trapezoid Area = $\frac{1}{2}h(b_1 + b_2)$	Sphere Volume = $\frac{4}{3}\pi r^3$ Surface Area = $4\pi r^2$	
Circle Area = $\pi r^2$ Circumference = $2\pi r$ or Circumference = $2\pi r$	Right Cone Volume = $\frac{1}{3}\pi r^2h$	
Pi $\pi = 3.14$	Square Pyramid Volume = $\frac{1}{3}s^2h$	
Fahrenheit to Celsius $C = \frac{5}{9}(F - 32)$	Distance $d = rt$	
Celsius to Fahrenheit $F = \left(\frac{9}{5}C\right) + 32$	Pythagorean Theorem  where $a$ and $b$ are the legs of the triangle and $c$ is the hypotenuse	
Simple Interest $I = prt$	Standard Form: $Ax + By = C$	
Distance Formula $D = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$	Slope-Intercept Form: $y = mx + b$	
Midpoint Formula: For a line segment with endpoints $(a,b)$ and $(c,d)$ , the midpoint is: $\left(\frac{a+c}{2}, \frac{b+d}{2}\right)$	Point-Slope Form: $y - y_1 = m(x - x_1)$	

**Conversions**

1 yard = 3 feet = 36 inches	8 fluid ounces = 1 cup	1 kilometer = 1000 meters
1 mile = 1760 yards = 5280 feet	2 cups = 1 pint	1 meter = 100 centimeters
1 acre = 43,560 square feet	2 pints = 1 quart	1 centimeter = 10 millimeters
60 seconds = 1 minute	4 quarts = 1 gallon	1 kilogram = 1000 grams
60 minutes = 1 hour	16 ounces = 1 pound	1 liter = 1000 milliliters

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## Mathematics Reference Sheet:

[http://www.dese.mo.gov/divimprove/assess/documents/mathematics\\_reference\\_sheet.pdf](http://www.dese.mo.gov/divimprove/assess/documents/mathematics_reference_sheet.pdf)