

**Helena Public Schools
High School Mathematics
Technical Math - Teacher Resource**

Over-riding practices:

- Extensive use of word problems with trades based applications.
- Answers examined for appropriate unit(s) and accuracy.

Focal Points	
	<ul style="list-style-type: none"> • Addition, subtraction, multiplication, and division of whole numbers, fractions, decimals, and integers without calculators.
Ratios and Proportions	<ul style="list-style-type: none"> • Set up and solve proportions from applicable ratios and word problems
Conversion and unit analysis	<ul style="list-style-type: none"> • English units – use ratios to convert (in → ft). • Metric units – use ratios to convert (g → kg). • English and metric units – use ratios to convert (L → gal). • Unit analysis (m/s → mi/hr).
Measurement	<ul style="list-style-type: none"> • Tape measure accurate to 16th of an inch. • Various styles of calipers to 1000th. • Protractors to the nearest degree. • Various meters to an appropriate place value based on context.
Algebra	<ul style="list-style-type: none"> • Evaluate/solve trade based formulas for any variable (ex: $V = IR$).
	<ul style="list-style-type: none"> • Calculate area, perimeter, volume, and surface area of various 2- and 3-dimensional figures. <ul style="list-style-type: none"> ○ Ex: Area/perimeter of a triangle ○ Ex: Volume/surface area of a triangular prism.
Triangle Trigonometry	<ul style="list-style-type: none"> • Use to solve for unknown values. <ul style="list-style-type: none"> ○ SOHCAHTOA ○ Inverse Trigonometry Functions ○ Pythagorean Theorem

Maintenance Topics

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