

Carpentry -11th GRADE

Integrated Math Curriculum

	Description of lesson	Math Concepts	PA CC Standards	Keystone Eligible Content
1	Review worksheet of 10 th grade – **GRADE	Without a Calculator - Fractions, Decimals, Percent, Conversions, Measurement, Pythagorean Theorem	CC.2.1.HS.F.2 Apply properties of rational and irrational numbers to solve real-world or mathematical problems. CC.2.2.8.C.2 Use concepts of functions to model relationships between quantities.	Alg1: A1.1.1.1 , A1.2.2.1 Geo: None Alg2: None
2	Estimation Day 1 - Estimate Brick	Area, rate, ratio, perimeter	CC.2.3.HS.A.14 Apply geometric concepts to model and solve real world problems.	Alg1: None Geo: G.2.3.1.1 Alg2: None
3	Estimation Day 2 - Estimate Brick (examples, what's wrong)	Area, rate, ratio, perimeter	CC.2.3.HS.A.14 Apply geometric concepts to model and solve real world problems.	Alg1: None Geo: G.2.3.1.1 Alg2: None
4	Estimation Day 4 - Estimate Block	Area, rate, ratio, perimeter	CC.2.3.HS.A.14 Apply geometric concepts to model and solve real world problems.	Alg1: None Geo: G.2.3.1.1 Alg2: None
5	Estimation - Day5 Estimate Concrete, footer, wall, slab (HW Practice ALL **GRADE)	Volume, cylinder, sphere, cone, prism	CC.2.3.8.A.1 Apply the concepts of volume of cylinders, cones, and spheres to solve real-world and mathematical problems.	Alg1: None Geo: G.2.3.1.2 Alg2: None
6	Estimation Application Day – Estimate Brick, Block, Concrete, footer, wall, slab **GRADE	Area, rate, ratio, perimeter, Volume, cylinder, sphere, cone, prism	CC.2.3.8.A.1 Apply the concepts of volume of cylinders, cones, and spheres to solve real-world and mathematical problems.	Alg1: None Geo: G.2.3.1.2 Alg2: None
7	Estimation Application Day2 - Estimate Brick, Block, Concrete, footer, wall, slab **GRADE	Area, rate, ratio, perimeter, Volume, cylinder, sphere, cone, prism	CC.2.3.8.A.1 Apply the concepts of volume of cylinders, cones, and spheres to solve real-world and mathematical problems.	Alg1: None Geo: G.2.3.1.2 Alg2: None
8	Special Triangles - roof trusses (HW **GRADE)	30-60-90 Triangles, 45-45-90 Triangles	CC.2.3.HS.A.14 Apply geometric concepts to model and solve real world problems.	Alg1: None Geo: G.1.2.1.1 Alg2: None
9	Trig in CARP - stairs, ramps, squaring buildings, windows, rise, run, pitch, code (Slides, Quiz)	Sine, Cosine, Tangent, opposite, adjacent, hypotenuse, angle	CC.2.3.HS.A.7 Apply trigonometric ratios to solve problems involving right triangles.	Alg1: None Geo: G.2.1.1.2 Alg2: None
10	Trig in CARP - stairs, ramps, squaring buildings, windows, rise, run, pitch, code (practice together)	Sine, Cosine, Tangent, opposite, adjacent, hypotenuse, angle	CC.2.3.HS.A.7 Apply trigonometric ratios to solve problems involving right triangles.	Alg1: None Geo: G.2.1.1.2 Alg2: None

11	Trig in CARP - stairs, ramps, squaring buildings, windows, rise, run, pitch, code	Inverse Trig, opposite, adjacent, hypotenuse, angle	CC.2.3.HS.A.7 Apply trigonometric ratios to solve problems involving right triangles.	Alg1: None Geo: G.2.1.1.2 Alg2: None
12	Trig in CARP Application Day - stairs, ramps, squaring buildings, windows, rise, run, pitch, code **GRADE	Sine, Cosine, Tangent, Inverse Trig, opposite, adjacent, hypotenuse, angle	CC.2.3.HS.A.7 Apply trigonometric ratios to solve problems involving right triangles.	Alg1: None Geo: G.2.1.1.2 Alg2: None
13.	Meeting Code – tread, rise, total rise, total run, code, stringer, nosing, slope	Systems of Inequalities, Solutions to systems of Inequalities, Graph, Slope	CC.2.2.HS.D.10 Represent, solve, and interpret equations/inequalities and systems of equations/inequalities algebraically and graphically.	Alg1: A1.1.3.2.1 Geo: None Alg2: None
14	Meeting Code Application Day – tread, rise, total rise, total run, code, stringer, nosing, slope **GRADE	Systems of Inequalities, Solutions to systems of Inequalities, Graph, Slope	CC.2.2.HS.D.10 Represent, solve, and interpret equations/inequalities and systems of equations/inequalities algebraically and graphically.	Alg1: A1.1.3.2.1 Geo: None Alg2: None
15	Business and Statistics Part 1 - Overtime, Commission, Gross Pay, Taxes, Labor	Using Formulas, Multi-step Problems, Percentage, Decimals	CC.2.2.HS.D.8 Apply inverse operations to solve equations or formulas for a given variable. CC.2.1.HS.F.4 Use units as a way to understand problems and to guide the solution of multi-step problems.	Alg1: A1.1.2.1.1 Geo: None Alg2: None
16	Business and Statistics Part 4 - Managing Business Checking	Using Formulas, Multi-step Problems, Percentage, Decimals	CC.2.2.HS.D.8 Apply inverse operations to solve equations or formulas for a given variable. CC.2.1.HS.F.4 Use units as a way to understand problems and to guide the solution of multi-step problems.	Alg1: A1.1.2.1.1 Geo: None Alg2: None
17	Business and Statistics Application Day – Overtime, Commission, Gross Pay, Taxes, Labor, Managing Business Checking **GRADE	Using Formulas, Multi-step Problems, Percentage, Decimals	CC.2.2.HS.D.8 Apply inverse operations to solve equations or formulas for a given variable. CC.2.1.HS.F.4 Use units as a way to understand problems and to guide the solution of multi-step problems.	Alg1: A1.1.2.1.1 Geo: None Alg2: None