# Paradigm 7th Grade Math Correlation to Utah Core Standards

Concept Name	Example	Utah Core Standards
Basic Operations		
Addition, subtraction, multiplication, division	$1.25 + $12.50 + $5 $20 - $5.25 $7.03 X 15 4825 ÷ 6	
Place value	Show how to write this number using digits: one billion, fifty-seven thousand, thirty-three and twenty-eight thousandths	
Prime factorization	23, 28, 31, 35, 47 Which of these numbers are prime and which are composite?	
Mean, median, mode and range	15, 18, 17, 20, 18 Find the average of these numbers	
Fractions - idea, parts, pictures, equivalent	What is a denominator? Numerator? Improper fraction? Mixed number?	
Fractions: GCF, LCM, mixed numbers	$$\frac{3}{4} \div \frac{2}{3}$$	
Decimals: idea, place value, rounding	Round to the nearest tenth 23.368	
Decimals +, -, x, ÷	4.8 ÷ 0.6	
Percent	What number is $\frac{4}{5}$ of 30? That number is what percent of 30?	7.RP.3
Decimal/fraction/% conversion	Complete the table <table><tr><td>Fraction</td><td>Decimal</td><td>percent</td></tr><tr><td>$\frac{1}{12}$</td><td></td><td></td></tr><tr><td></td><td>0.5</td><td></td></tr></table>	
Fractions +, -, x, ÷	Simplify: $2\frac{1}{2} - \frac{1}{5} \div \frac{2}{3}$	7.RP.1
Scientific notation	Write this number in scientific notation 398,000	
Proportion & Probability		
Probability	There are 14 blue marbles and 21 red marbles. What is the ratio of blue to red marbles?	
Ratios, proportions, & unit rate		7.RP.1 7.RP.2 7.RP.3
Variable Manipulation		
Order of operations	$$\frac{9 + 5 \times 4 - 5}{9 \times 3 - 6 \times 4}$$	
Missing numbers in +, -, X, ÷	Q - 23 = 46	
Measurement/unit conversions	If a pen is 14.5 cm long, how long is it in mm?	7.RP.1
Data Collection, Representation & Interpretation	 This chart shows a survey of students favorite pizza toppings. What fraction of the students chose supreme?	7.RP.2 7.EE.3 7.EE.4

Algebraic Terms and 2 step equations	Solve for x: $$1\frac{3}{4}x = 6 + x$$ 4YZ + 3YZ (4YZ)(3YZ) 4YZ - 3YZ (4YZ) ÷ (3YZ)	7.EE.1 7.EE.2
System of equations	3x + 2y = 5 and 3x + 2y = 6 have no solution because 3x + 2y cannot simultaneously be 5 and 6	7.EE.3 7.EE.4
Powers and roots	Simplify $$\sqrt{225}$$	
Integers/signed equations	(-3) + (4) and (-5) + (-2)	7.EE.3

Plane Geometry

Angles, lines, triangles	Describe these triangles: right, acute, obtuse, equilateral, scalene, isosceles	7.G.1 7.G.2
Pythagorean theorem	If the base of a right triangle is 4 and the height is 3, what is the length of the hypotenuse?	
Area and perimeter	Find the area of this figure 9 cm 6 cm 2 cm 10 cm	7.G.1
Surface area & volume	Find the volume and surface area of the cylinder	7.G.6
Circles: circumference/area	12 cm Find the area of this circle	7.G.4
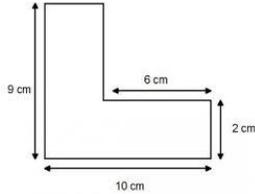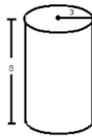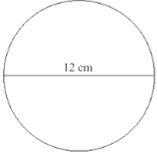
Coordinate Geometry
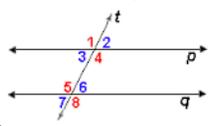
Parallel, perpendicular, angles, line segments, supplementary, complimentary adjacent angles	Lines p and q are parallel. Angle 1 is 110° find the measure of all the other angles.	7.G.2 7.G.5
Slope and coordinating plane	Draw a triangle on a coordinate plane with vertices at (-3, 1), (0,4) and (3, -1)	
Symmetry, similar, reflections, rotations, translations,		7.G.3