Math·U·See

Objectives List: *Zeta*

Lesson 1

ZE.1.a	Model exponents with the same base raised to a power of two using manipulative blocks
ZE.1.b	Evaluate exponents with the same base using blocks
ZE.1.c	Name numbers in exponential form in at least three different ways
ZE.1.d	Apply appropriate strategies to solve word problems

Lesson 2

ZE.2.a	Use models to show place value in expanded notation
ZE.2.b	Write numbers in expanded notation
ZE.2.c	Express numbers in exponential notation
ZE.2.d	Evaluate exponents with a base of ten

Lesson 3

ZE.3.a	Write decimals in expanded notation
ZE.3.b	Rewrite decimal numbers in decimal notation
ZE.3.c	Determine whether to multiply or divide by ten when "moving" a decimal point to increase or decrease its value
ZE.3.d	Explain why money is a practical application for the use of decimal values

Lesson 4

ZE.4.a	Use models to add decimal values
ZE.4.b	Apply regrouping principles to compute decimal addition problems accurately
ZE.4.c	Apply knowledge of adding decimals to solve word problems

Lesson 5

ZE.5.a	Use models to subtract decimal values
ZE.5.b	Apply regrouping principles to compute decimal subtraction problems accurately
ZE.5.c	Apply knowledge of subtracting decimals to solve word problems

Lesson 6

ZE.6.a	Name metric prefixes that describe large quantities
ZE.6.b	Identify corresponding value for metric prefixes
ZE.6.c	Express metric measurement relationships for large quantities as ratios
ZE.6.d	Determine the best metric measure for a given object or situation
ZE.6.e	Convert given values between metric units that describe large quantities

Lesson 7

ZE.7.a	Name metric prefixes that describe small quantities
ZE.7.b	Identify corresponding values for metric prefixes
ZE.7.c	Express metric measurement relationships for small quantities as ratios
ZE.7.d	Determine the best metric measure for a given object or situation
ZE.7.e	Estimate using metric units of measure
ZE.7.f	Solve multi-step word problems using metric measurement

Lesson 8

ZE.8.a	Convert large metric units to smaller metric units
ZE.8.b	Convert large metric units to smaller metric units using the "shortcut" (adding zeros)
ZE.8.c	Determine which metric unit corresponds most closely with U.S. customary units
ZE.8.d	Apply knowledge of the metric system to solve multi-step problems

Lesson 9

ZE.9.a	Model multiplication of tenths using blocks
ZE.9.b	Multiply tenths using place-value notation
ZE.9.c	Multiply tenths using decimal notation
ZE.9.d	Apply knowledge of multiplying tenths to solve word problems

Lesson 10

ZE.10.a	Multiply hundredths using decimal notation
ZE.10.b	Multiply hundredths using the standard algorithm
ZE.10.c	Apply knowledge of multiplying hundredths to solve word problems

Lesson 11

ZE.11.a	Model the relationship between fractions, decimals, and percentages
ZE.11.b	Explain that percent means out of one hundred
ZE.11.c	Write a percentage as a decimal
ZE.11.d	Write a percentage as a fraction
ZE.11.e	Identify common decimals and fractions as percentages (e.g., $\frac{1}{4}$ = 0.25 = 25%)
ZE.11.f	Change a percentage to a decimal
ZE.11.g	Change a percentage to a fraction
ZE.11.h	Use knowledge of percentages to solve word problems

Lesson 12

ZE.12.a	Change a whole number to a percentage
ZE.12.b	Change a fraction to a percentage
ZE.12.c	Convert a mixed number to a percentage
ZE.12.d	Convert a decimal to a percentage
ZE.12.e	Solve problems by converting among quantities written as a fraction, decimal, and percentage

Lesson 13

ZE.13.a Explain that a pie graph represents a visual presentation of the whole and its parts

ZE.13.b Interpret data on a pie graph

ZE.13.c Find the percent of a number given data on a pie graph

ZE.13.d Apply knowledge of percent to display data on a pie graph

Lesson 14

ZE.14.a Estimate factors to verify the reasonableness of an answer

ZE.14.b Multiply decimal values using decimal notation

ZE.14.c Calculate the placement of a decimal point in a decimal multiplication problem by counting the spaces to the right of the decimal point

ZE.14.d Solve problems that involve multiplication of decimal values

Lesson 15

ZE.15.a Convert small metric units to larger metric units by using ratios

ZE.15.b Use the shortcut method of "moving" one decimal place for each step when converting metric units

Lesson 16

ZE.16.a Substitute the approximation of π (3.14) into formulas to calculate values for a circle

ZE.16.b Apply the formulas πd and $2\pi r$ to calculate the circumference of a circle

ZE.16.c Compute the area of a circle using the formula πr^2

Lesson 17

ZE.17.a Divide a decimal by a whole number

ZE.17.b Identify where to place the decimal point in the quotient

ZE.17.c Explain the procedure for dividing a decimal by a whole number

ZE.17.d Use multiplication to check the accuracy of the answer for a division problem

Lesson 18

ZE.18.a Divide whole numbers by a decimal value

ZE.18.b Adjust decimal points by multiplying the divisor and dividend by the same power of 10

ZE.18.c Use estimation to determine the reasonableness of a quotient

ZE.18.d Apply knowledge of dividing decimal numbers to solve word problems

Lesson 19

ZE.19.a Divide to solve equations with decimal values

ZE.19.b Use equations with decimal values to solve word problems

Lesson 20

ZE.20.a Divide a decimal by a decimal value

Lesson 21

ZE.21.a Divide a decimal by a whole number by adding zeros to yield a quotient without a remainder

ZE.21.b Express a quotient by rounding to a given place value when numbers do not divide evenly

ZE.21.c Write a remainder as a decimal

ZE.21.d Divide until a pattern is determined and write the answer with a vinculum over the repeating digits

ZE.21.e Express a remainder as a fraction

Lesson 22

ZE.22.a Solve for an unknown in an equation

ZE.22.b Substitute the solution for the variable in the original equation to verify the answer

Lesson 23

ZE.23.a Convert fractions to decimals

ZE.23.b Convert fractions to decimals and percentages to solve problems

Lesson 24

ZE.24.a Write a terminating decimal as a fraction in simplest form

ZE.24.b Use knowledge of decimals and fractions to solve problems

Lesson 25

ZE.25.a Calculate the mean for a set of data

ZE.25.b Find the median for a set of data

ZE.25.c Determine the mode for a set of data

ZE.25.d Analyze a given set of data using mean, median, and mode

Lesson 26

ZE.26.a Determine the probability of how likely something is to happen or to be true in a given scenario

ZE.26.b Record the probability in ratio form in lowest terms for a given scenario

Lesson 27

ZE.27.a Define the geometric terms point, line, ray, and line segment

ZE.27.b Draw representations for the geometric terms point, line, ray, and line segment

ZE.27.c Represent a point, line, ray, and line segment using geometric symbols

ZE.27.d Identify the symbol for infinity

ZE.27.e Define infinity

ZE.27.f Explain the relationship of infinity to a point, line, ray, and line segment

Lesson 28

ZE.28.a	Define zero-, one-, two-, and three-dimensional geometric shapes
ZE.28.b	Identify zero-, one-, two-, and three-dimensional geometric shapes
ZE.28.c	Define similar, equal, and congruent
ZE.28.d	Identify the symbols for similar, equal, and congruent

Lesson 29

ZE.29.a	Name the parts of an angle
ZE.29.b	Define angle and right angle
ZE.29.c	Use letters and symbols to name angles
ZE.29.d	Explain that angles are measured in degrees
ZE.29.e	Identify a box symbol as a representation of a 90-degree angle
ZE.29.f	State that a circle contains 360 degrees

Lesson 30

ZE.30.a	Define acute, obtuse, and straight angles
ZE.30.b	Classify an angle as acute, obtuse, right, or straight
ZE.30.c	Determine if an angle is acute, obtuse, right, or straight, given a degree measurement