

Sudan I.S.D. Benchmark Targets / Fourth Grade

Fourth Grade

Mathematics – First Six Weeks

Vocabulary

PLACE VALUE

base ten
decimal
digit
even
expanded form
hundreds
hundred thousands
hundredths
millions
numeral
number line
odd
ones
tens
ten thousands
tenths
thousands
whole numbers

ADDITION

addend
combined total
in all
regroup
sum
total

SUBTRACTION

difference
left over
making change
minus
regroup

MONEY

cent
dime
dollar
half dollar
nickel
penny

quarter

COMPARE/ORDER

compare

decrease

equal to

equivalent

greater than

greatest

increase

least

less than

set of numbers

symbol

SOLUTION

STRATEGIES

act it out

about

approximate

draw a picture

equation

estimate

expression

extraneous

information

find a pattern

guess and check

manipulatives

missing data

missing information

number pattern

number sentence

predict

prediction

reasonable answer

round

sequence

solution sentence

logical reasoning

work backwards

GRAPHS

bar graph

chart

circle graph

column

data

line graph

pictograph

represents
table

Assurances

By the end of fourth grade, the student will:

- 1. Know all addition, subtraction, multiplication, and division facts.**
- 2. Use place value to read, write, compare, and locate whole numbers through millions and decimals through hundredths.**
- 3. Solve two-step addition and subtraction problems using whole numbers and decimals.**
- 4. Solve problems using multiplication (two-digit numbers) and division (one digit divisors).**
- 5. Round numbers to the nearest ten, hundred, or thousand, and estimate sums, differences, products, and quotients.**
- 6. Compare and order fractions (using models).**
- 7. Identify, compare, and contrast solids, angles, congruent figures, and lines of symmetry.**
- 8. Select appropriate units, estimate, and measure weight, capacity, length, time, and temperature.**
- 9. Solve graphing problems by constructing and interpreting data in complex tables, charts, line graphs, pictographs, or bar graphs.**
- 10. Use the problem-solving model to solve appropriate grade level problems.**

The student will:

1. Use whole number place value to read whole numbers through the millions place involving tenths and hundredths using concrete models. (TEKS 1A-B; TAKS 1)
2. Write whole numbers (name to numeral/numeral to name) through the millions place involving tenths and hundredths. (TEKS 1A-B; TAKS 1)
3. Compare and order whole numbers through the millions place involving tenths and hundredths using least to greatest, greatest to least, and equal to ($<$, $>$, and $=$). (TEKS 1A-B; TAKS 2)
4. Use odds, evens, and skip counting to generate patterns and determine missing elements in patterns and word problems.
5. Draw, locate, and name points on a number line that include whole numbers. (TEKS 10; TAKS 3)
6. Round numbers to the nearest ten, hundred, or thousand. (TEKS 5A; TAKS 1)
7. Estimate sums and differences by rounding to the nearest ten, hundred, or thousand. (TEKS 5A; TAKS 1)

8. Add numbers up to 5 digits with and without regrouping (including columns of numbers). (TEKS 3A; TAKS 1)
9. Add money values when written in decimal format (Ex.: \$69.95 + \$7.86). (TEKS 3B; TAKS 1)
10. Subtract numbers up to 5 digits with and without regrouping and across zeros. (TEKS 3A; TAKS 1)
11. Subtract money values when written in decimal format. (Ex.: \$2.83 - \$1.47). (TEKS 3B; TAKS 1)
12. Solve problems involving money and making change. (TEKS 3A-B; TAKS 1)
13. Solve problems and make predictions by collecting, organizing, displaying, and interpreting data in tables/charts, line graphs, picture graphs or bar-type graphs where the symbol may or may not represent more than one piece of data. (TEKS 13C, TAKS 5)
14. Internalize and recall all basic addition, subtraction, and multiplication facts (oral/written--40 facts within 3 minutes).
15. Solve problems connected to everyday experiences in and outside of school. (TEKS 14A-D; TAKS 6)
- Identify the mathematics in everyday situations.
 - Use a problem-solving model that incorporates understanding the problem, making a plan, carrying out the plan, and looking back to evaluate the solution.
 - Select or develop an appropriate problem-solving strategy including drawing a picture, looking for a pattern, systematic guessing and checking, or acting it out in order to solve problems.
 - Use tools such as real objects, manipulatives, calculators and technology to solve problems.
16. Communicate about mathematics using informal language. (TEKS 15A-B; TAKS 6)
- Explain and record observations using objects, words, pictures, numbers, and technology.
 - Relate informal language to mathematical language and symbols.
17. Reason and support thinking using objects, words, pictures, numbers, and technology. (TEKS 16; TAKS 6)

Second Six Weeks

Vocabulary

MULTIPLICATION

arrays
double
family of facts
factors

inverse operation
multiples
product
skip counting
times
triple
twice
DIVISION
compatible
dividend
divisible
divisor
equal groups
quotient
remainder

The student will:

18. Use patterns to develop strategies to internalize basic multiplication facts to learn and recall division

facts through the twelves (oral and written--40 facts within 3 minutes at 85% mastery).

(TEKS 4C;

TAKS 1)

- Doubles
- Five facts
- Zeros and ones
- Nifty nines
- One more/one less than
- Arrays

19. Use fact families and patterns for multiplication, model factors and products, and represent

multiplication situations in picture, word, and number form. (TEKS 4A-B, 6A; TAKS 1, 2)

20. Multiply one, two- and three-digit numbers by multiples of 10, 100, and 1,000.(TEKS 4B, 6C;

TAKS 1, 2)

21. Estimate products by rounding to the nearest ten, hundred, or thousand. (TEKS 5A-B; TAKS 1)

22. Multiply two-, three-, and four-digit numbers by one digit numbers with and without regrouping,

and solve word problems applying the concept. (TEKS 4D, 14; TAKS 1, 6)

23. Multiply values of money written as a decimal by a one-digit number (Ex.: $\$6.78 \times 7$).

24. Solve division problems related to multiplication facts (fact families). (TEKS 6B; TAKS 2)

25. Multiply two- and three-digit numbers by a two-digit number (including multiples of 10) to solve problems. (TEKS 4D; TAKS 1)

26. Divide two-digit numbers by one-digit numbers with and without remainders and check with multiplication. (TEKS 4D-E; TAKS 1)
27. Estimate quotients to solve problems. (TEKS 5B; TAKS 1)
28. Divide three-digit numbers by one-digit numbers with and without remainders and check with multiplication. (TEKS 4D-E; TAKS 1)
29. Determine which operation to use and solve word problems involving addition, subtraction, multiplication, and division (including problems requiring the elimination of extraneous information and/or the reading of graphs and charts). (TEKS 3A, 4C-E, 14A-D; TAKS 1, 6)
30. Solve problems connected to everyday experiences in and outside of school. (TEKS 14A-D; TAKS 6)
- Identify the mathematics in everyday situations.
 - Use a problem-solving model that incorporates understanding the problem, making a plan, carrying out the plan, and looking back to evaluate the solution.
 - Select or develop an appropriate problem-solving strategy including drawing a picture, looking for a pattern, systematic guessing and checking or acting it out in order to solve problems.
 - Use tools such as real objects, manipulatives, calculators and technology to solve problems.
31. Communicate about mathematics using informal language. (TEKS 15A-B; TAKS 6)
- Explain and record observations using objects, words, pictures, numbers, and technology.
 - Relate informal language to mathematical language and symbols.
32. Reason and support thinking using objects, words, pictures, numbers, and technology. (TEKS 16; TAKS 6)

Third Six Weeks

Vocabulary

MEASUREMENT

capacity

Celsius

centimeter

cup

customary system

distance

Fahrenheit

foot

gallon

gram

inch
kilogram
kilometer
length
liter
mass
math chart
meter
metric system
mile
milliliter
millimeter
ounce
pint
pound
temperature
weight
volume
yard

PROBABILITY

certain
equally likely
favorable
impossible
least/less likely
most likely
outcome
possible
random

The student will:

33. Estimate, measure, and solve problems using customary units to measure length (inch, foot, yard, and mile). (TEKS 12; TAKS 4)
34. Estimate, measure, and solve problems using customary units to measure weight (ounce, pound, and ton). (TEKS 11A; TAKS 4)
35. Estimate, measure, and solve problems using customary units to measure capacity (cups, pints, quarts, and gallons). (TEKS 11B; TAKS 4)
36. Estimate, measure, and solve problems using metric units to measure length (millimeter, centimeter, meter, and kilometer). (TEKS 12; TAKS 4)
37. Estimate, measure, and solve problems using metric units to measure weight (grams and kilograms). (TEKS 11A; TAKS 4)

38. Estimate, measure, and solve problems using metric units to measure capacity (milliliter and liter). (TEKS 11B; TAKS 4)
39. Read temperatures on a Fahrenheit and Celsius thermometer to answer questions concerning degrees, boiling point, and freezing point. (TEKS 12; TAKS 4)
40. Choose the appropriate units and procedures to solve problems involving weight, capacity, length, time, and temperature. (TEKS 12; TAKS 4)
41. Use a math chart to select and perform measurement conversions.
42. Use previously learned multiplication facts to learn, internalize, and recall division facts through the twelves (oral and written--40 facts within 3 minutes at 85% mastery).
43. Solve problems involving conversions within the same system of measurement.
44. Solve problems connected to everyday experiences in and outside of school. (TEKS 14A-D; TAKS 6)
- Identify the mathematics in everyday situations.
 - Use a problem-solving model that incorporates understanding the problem, making a plan, carrying out the plan, and looking back to evaluate the solution.
 - Select or develop an appropriate problem-solving strategy including drawing a picture, looking for a pattern, systematic guessing and checking or acting it out in order to solve problems.
 - Use tools such as real objects, manipulatives, calculators and technology to solve problems.
45. Communicate about mathematics using informal language. (TEKS 15A-B; TAKS 6)
- Explain and record observations using objects, words, pictures, numbers, and technology.
 - Relate informal language to mathematical language and symbols.
46. Reason and support thinking using objects, words, pictures, numbers, and technology. (TEKS 16; TAKS 6)
47. List all possible outcomes of a probability experiment in a chart or table (tossing coins, pulling marbles out of a bag, etc.) and determine the probability of an event. (TEKS 13A; TAKS 5)
48. Use a pair of numbers to compare favorable outcomes to all possible outcomes such as four heads out of six tosses of a coin and express as a fraction (TEKS 13B; TAKS 5)

Fourth Six Weeks

Vocabulary

TIME

A.M. (ante meridian)

calendar
clock
days
elapsed time
half-hour
hour
minute
month
o'clock
P.M.(post meridian)
quarter past
quarter 'til
second
week(s)
year(s)
FRACTIONS
denominator
eighths
(generate) equivalent fractions
factor
fifths
fourths
fractional parts
halves
hundredths
improper fraction
lowest terms
mixed number
multiples
numerator
part of a region
part of a set
proper fraction
shaded/unshaded
simplest form
tenths
thirds

The student will:

49. Tell time and solve problems using the concepts of time (seconds, minutes, hours, days, weeks, months, and years). (TEKS 12; TAKS 4)
50. Determine elapsed time (before and after a given time) in a problem-solving situation with and without a picture of a clock. (TEKS12; TAKS4)
51. Use a calendar to solve problems involving days, weeks, months, or years (including conversions). (TEKS 12; TAKS 4)

52. Solve problems involving conversions within the same system of measurement. (TEKS 12; TAKS 4)
53. Recognize, name, and write fractional parts of a whole or set using pictorial models.
54. Identify the numerator and denominator of a fraction.
55. Identify and generate equivalent fractions using models and pictures. (TEKS 2A; TAKS 1)
56. Compare and order fractions and relate decimals to fractions that name tenths and hundredths using concrete and pictorial models. (TEKS 2C, D; TAKS 1)
57. Identify, model, and write mixed numbers to represent fraction quantities greater than one using concrete materials and pictures. (TEKS 2B; TAKS 1)
58. Draw, locate, and name points on a number line using whole numbers, decimals such as tenths, and fractions such as halves, fourths, and eighths. (TEKS 10; TAKS 3)
59. Add and subtract decimals to the hundredths place using concrete and pictorial models (including money). (TEKS 3B; TAKS 1)
60. Solve word problems involving the addition or subtraction of decimals (tenths and hundredths) using concrete and pictorial models. (TEKS 3B, 14A-D; TAKS 1, 6)
61. Internalize and recall all basic addition, subtraction, multiplication and division facts (oral/written--40 facts within 3 minutes at 85% mastery).
62. Solve problems connected to everyday experiences in and outside of school. (TEKS 14A-D; TAKS 6)
- Identify the mathematics in everyday situations.
 - Use a problem-solving model that incorporates understanding the problem, making a plan, carrying out the plan, and looking back to evaluate the solution.
 - Select or develop an appropriate problem-solving strategy including drawing a picture, looking for a pattern, systematic guessing and checking or acting it out in order to solve problems.
 - Use tools such as real objects, manipulatives, calculators and technology to solve problems.
63. Communicate about mathematics using informal language. (TEKS 15A-B; TAKS 6)
- Explain and record observations using objects, words, pictures, numbers, and technology.
 - Relate informal language to mathematical language and symbols.
64. Reason and support thinking using objects, words, pictures, numbers, and technology. (TEKS 16; TAKS 6)

Mathematics – Fifth Six Weeks

Vocabulary

GEOMETRY

acute angle

angle

area

base

circle

cone

congruent

cube

cylinder

degree

diagonal

edge

equilateral triangle

exterior

faces

height

hexagon

interior

intersecting lines

isosceles triangle

line

line segment

obtuse angle

octagon

oval (ellipse)

parallelogram

parallel line

pentagon

perimeter

perpendicular lines

point

polygon

prism

protractor

pyramid

quadrilateral

ray

rectangle

rectangular prism

reflection (flip)

rhombus

right angle

right triangle

rotation (turn)

scalene triangle
sides
similar figures
similarity
solid figure
sphere
square
square unit
straight angle
symmetrical
symmetry
translation (slide)
trapezoid
triangle
triangular prism
vertices (corners)
volume

The student will:

65. Describe the relationship between two sets of related data in a table. (TEKS 7, TAKS 2)
66. Recognize, identify, and name characteristics of a polygon, quadrilateral, & parallelogram. (TEKS 8C; TAKS 3)
67. Recognize/name, describe, and compare 2-dimensional figures: square, rectangle, circle, triangle, pentagon, hexagon, octagon, rhombus, parallelogram, and quadrilateral (number of sides, vertices). (TEKS 8C; TAKS 3)
68. Use geometric terms to identify lines (intersecting, perpendicular, and parallel) by matching with picture and definition. (TEKS 8B; TAKS 3)
69. Use geometric terms to identify right, acute, and obtuse angles by matching with picture and definition. (TEKS 8A; TAKS 3)
70. Demonstrate reflections, rotations, and translations using concrete models and use reflections, rotations, and translations to verify that two shapes are congruent. (TEKS 9A-B; TAKS 3)
71. Use reflections to verify that a shape has symmetry. (TEKS 9C; TAKS 3)
72. Measure and solve problems involving perimeter and area. (TEKS 12A; TAKS 4)
73. Recognize/name, describe, and compare 3-dimensional figures: cube, sphere, cone, cylinder, rectangular prism, triangular prism, and pyramid (number of faces, edges, vertices). (TEKS 8C; TAKS 3)
74. Internalize and recall all basic addition, subtraction, multiplication and division facts

(oral/written--40 facts within 3 minutes at 85% mastery).

75. Solve problems connected to everyday experiences in and outside of school. (TEKS 14A-D;

TAKS 6)

- Identify the mathematics in everyday situations.
- Use a problem-solving model that incorporates understanding the problem, making a plan, carrying out the plan, and looking back to evaluate the solution.
- Select or develop an appropriate problem-solving strategy including drawing a picture, looking for a pattern, systematic guessing and checking or acting it out in order to solve problems.
- Use tools such as real objects, manipulatives, calculators and technology to solve problems.

76. Communicate about mathematics using informal language. (TEKS 15A-B; TAKS 6)

- Explain and record observations using objects, words, pictures, numbers, and technology.
- Relate informal language to mathematical language and symbols.

77. Reason and support thinking using objects, words, pictures, numbers, and technology. (TEKS 16;

TAKS 6)

Sixth Six Weeks

Vocabulary

average

billion

composite number

coordinate grid

denominator

fraction

GCF-greatest common factor

LCD-least common

mean

median

mode

ordered pair

plot

prime number

range

reduce

volume

The student will:

78. **(Introduce)** Measure volume using concrete models of cubic units ($L \times W \times H$). (5th Grade TEKS

10A, TAKS 4)

79. **(Introduce)** Divide by multiples of ten. (5th Grade TEKS 3C, TAKS 1)

80. **(Introduce)** Divide by two-digit numbers. (5th Grade TEKS 3C, TAKS 1)

81. Estimate quotients, products, sums, and differences to solve problems by rounding to the nearest

ten or hundred. (TEKS 5A-B; TAKS 1)

82. **(Introduce)** Find the average (mean) of a set of numbers (no more than 10 numbers).

83. **(Introduce)** Identify prime and composite numbers. (5th Grade TEKS 3D, TAKS 1)

84. **(Introduce)** Add and subtract fractions and mixed numbers with like denominators.

(5th Grade

TEKS 3E, TAKS 1)

85. **(Introduce)** Add and subtract fractions and mixed numbers with unlike denominators.

86. **(Introduce)** Use place value to read, write, compare and order whole numbers

through the billions

place. (5th Grade TEKS 1A, TAKS 1)

87. Internalize and recall basic addition, subtraction, multiplication and division facts

(oral/written--40

facts within 3 minutes at 85% mastery).

88. Solve problems connected to everyday experiences in and outside of school. (TEKS

14A-D;

TAKS 6)

- Identify the mathematics in everyday situations.

- Use a problem-solving model that incorporates understanding the problem, making a plan,

carrying out the plan, and looking back to evaluate the solution.

- Select or develop an appropriate problem-solving strategy including drawing a picture, looking for a pattern, systematic guessing and checking, or acting it out in order to solve problems.

- Use tools such as real objects, manipulatives, calculators and technology to solve problems.

89. Communicate about mathematics using informal language. (TEKS 15A-B; TAKS 6)

- Explain and record observations using objects, words, pictures, numbers, and technology.

- Relate informal language to mathematical language and symbols.

90. Reason and support thinking using objects, words, pictures, numbers, and technology.

(TEKS 16;

TAKS 6)