Math, Grade 4 (IMRA)

Subject: Mathematics
Grade: 04
Expectations: 53
Breakouts: 163

(a) Introduction.

1. The desire to achieve educational excellence is the driving force behind the Texas essential knowledge and skills for mathematics, guided by the college and career readiness standards. By embedding statistics, probability, and finance, while focusing on computational thinking, mathematical fluency, and solid understanding, Texas will lead the way in mathematics education and prepare all Texas students for the challenges they will face in the 21st century.

2. The process standards describe ways in which students are expected to engage in the content. The placement of the process standards at the beginning of the knowledge and skills listed for each grade and course is intentional. The process standards weave the other knowledge and skills together so that students may be successful problem solvers and use mathematics efficiently and effectively in daily life. The process standards are integrated at every grade level and course. When possible, students will apply mathematics to problems arising in everyday life, society, and the workplace. Students will use a problem-

(xiii)   communicate [mathematical reasoning's] implications using multiple representations, including symbols as appropriate

(xiv)

(ii)   decompose a fraction in more than one way into a sum of fractions with the same denominator using pictorial models and recording results with symbolic representations

(C)   determine if two given fractions are equivalent using a variety of methods;

(i)   determine if two given fractions are equivalent using a variety of methods

(D)   compare two fractions with different numerators and different denominators and represent the comparison using the symbols >, =, or

(i)   compare two fractions with different numerators

(ii)   compare two fractions with different denominators

(iii)   compare two fractions with different numerators and different denominators

(iv)   represent the comparison using the symbols >, =, or <

(E)   represent and solve addition and subtraction of fractions with equal denominators using objects and pictorial models that build to the number line and properties of operations;

(i)   represent addition of fractions with equal denominators using objects

(ii)   represent addition of fractions with equal denominators using pictorial models that build to the number line

(iii)   represent addition of fractions with equal denominators using properties of operations

(iv)   represent subtraction of fractions with equal denominators using objects

(v)   represent subtraction of fractions with equal denominators using pictorial models that build to the number line

(vi)   represent subtraction of fractions with equal denominators using properties of operations

(vii)   solve addition of fractions with equal denominators using objects

(viii)   solve addition of fractions with equal denominators using pictorial models that build to the number line

(ix)   solve addition of fractions with equal denominators using properties of operations

(x)   solve subtraction of fractions with equal denominators using objects

(xi)   solve subtraction of fractions with equal denominators using pictorial models that build to the number line

(xii)   solve subtraction of fractions with equal denominators using properties of operations

(F)   evaluate the reasonableness of sums and differences of fractions using benchmark fractions 0, 1/4, 1/2, 3/4, and 1, referring to the same whole; and

(i)   evaluate the reasonableness of sums of fractions using benchmark fractions 0, 1/4, 1/2, 3/4, and 1, referring to the same whole

(ii)   evaluate the reasonableness of differences of fractions using benchmark fractions 0, 1/4, 1/2, 3/4, and 1, referring to the same whole

(G)   represent fractions and decimals to the tenths or hundredths as distances from zero on a number line.

(i)   represent fractions to the tenths or hundredths as distances from zero on a number line

(ii)   represent decimals to the tenths or hundredths as distances from zero on a number line

(4)

(v)   identify angles

(vi)   identify perpendicular lines

(vii)   identify parallel lines

(B) identify and draw one or more lines of symmetry, if they exist, for a two-dimensional figure;

     (i)   identify one or more lines of symmetry, if they exist, for a two-dimensional figure

     (ii)   draw one or more lines of symmetry, if they exist, for a two-dimensional figure

(C) apply knowledge of right angles to identify acute, right, and obtuse triangles; and

(A)

(A) distinguish between fixed and variable expenses;

    (i) distinguish between fixed and variable expenses

(B) calculate profit in a given situation;

    (i) calculate profit in a given situation

(C) compare the advantages and disadvantages of various savings options;

    (i) compare the advantages of various savings options

    (ii) compare the disadvantages of various savings options

(D) describe how to allocate a weekly allowance among spending; saving, including for college; and sharing; and

    (i) describe how to allocate a weekly allowance among spending; saving, including for college; and sharing

(E) describe the basic purpose of financial institutions, including keeping money safe, borrowing money, and lending.

    (i) describe the basic purpose of financial institutions, including keeping money safe

    (ii) describe the basic purpose of financial institutions, including borrowing money

    (iii) describe the basic purpose of financial institutions, including lending