Math, Grade 8 (IMRA)

Subject: Mathematics
Grade: 08
Expectations: 52
Breakouts: 152

(a) Introduction.

    1.

(i)   apply mathematics to problems arising in everyday life

(ii)   apply mathematics to problems arising in society

(iii)   apply mathematics to problems arising in the workplace

(B) use a problem-

(iii)   locate that rational number approximation on a number line

(C) convert between standard decimal notation and scientific notation; and

(i)   convert between standard decimal notation and scientific notation

(D) order a set of real numbers arising from mathematical and real-world contexts.

(i)   order a set of real numbers arising from mathematical contexts

(ii)   order a set of real numbers arising from real-world contexts

(3) Proportionality. The student applies mathematical process standards to use proportional relationships to describe dilations. The student is expected to:

(A) generalize that the ratio of corresponding sides of similar shapes are proportional, including a shape and its dilation;

(i)   generalize that the ratio of corresponding sides of similar shapes are proportional, including a shape and its dilation

(B) compare and contrast the attributes of a shape and its dilation(s) on a coordinate plane; and

(i)   compare and contrast the attributes of a shape and its dilation(s) on a coordinate plane

(C) use an algebraic representation to explain the effect of a given positive rational scale factor applied to two-dimensional figures on a coordinate plane with the origin as the center of dilation.

(i)   use an algebraic representation to explain the effect of a given positive rational scale factor applied to two-dimensional figures on a coordinate plane with the origin as the center of dilation

2 Tw -44.15c T(4).4 B32 ortionality. The student applies mathematical process standards to explain proportional and non-proportional relationships involving slope. The student is expected to:

(A)   u(se 2,imvi)a.90g30uo6ayj5ex5t(2)6egJps906 Cqpdof esgl(op)-2 (or)BTd[(p)-1.(c)-2.1 (e)15x5 (of(de)3 (v)4. h][(p)-1.8 ( )6.5 (de)3or

(A)

(I) write an equation in the form y = mx + b to model a linear relationship between two quantities using verbal, numerical, tabwcb.1-2 (r re)-10x2.4 (5 (teaodm)2.6 (gr re)-1l)3.5 (p)2.5.5hic1-2 (c)2 (b.q)-4 (ur re)-13.7 (pr re)-13.7 (s re8-13

(10) Two-dimensional shapes. The student applies mathematical process standards to develop transformational geometry1.054 T6t.1 7Bo

(B) determine the mean absolute deviation and use this quantity as a measure of the average distance data are from the mean using a data set of no more than 10 data points; and

    (i) determine the mean absolute deviation

    (ii) use this quantity as a measure of the average distance data are from the mean using a data set of no more than 10 data points

(C) simulate generating random samples of the same size from a population with known characteristics to develop the notion of a random sample being representative of the population from which it was selected.

    (i) simulate generating random samples of the same size from a population with known characteristics to develop the notion of a random sample being representative of the population from which it was selected

(12) Personal financial literacy. The student applies mathematical process standards to develop an economic way of thinking and problem solving useful in one's life as a knowledgeable consumer and investor. The student is expected to:

(A) solve real-world problems comparing how interest rate and loan length affect the cost of credit;

    (i) solve real-world problems comparing how interest rate affect[s] the cost of credit