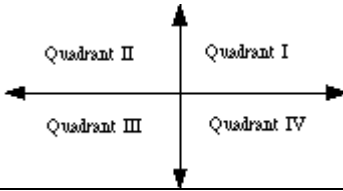


GPRM 022 Intensive Pre Mathematics

English	Arabic
Numerator “The top part of a fraction. For $\frac{12}{15}$, the numerator is 12.”	البسط
Denominator “The bottom part of a fraction. For $\frac{3}{5}$, the denominator is 5.”	المقام
Evaluate “To compute”	احسب
Like denominator “Same denominator”	نفس مقام
Unlike denominator “Not same denominator”	مقام غير متشابه
Natural Numbers “The numbers used for counting. That is, the numbers 1, 2, 3, 4, etc.”	الأعداد الطبيعية
Whole Numbers “Nonnegative Integers” The numbers 0, 1, 2, 3, 4, 5, etc.	الأعداد الكلية
Integer Numbers All positive and negative whole numbers (including zero). That is, the set $\{0, \mp 1, \mp 2, \mp 3, \mp 4, \dots\}$ Integers are indicated by \mathbb{Z}	الأعداد الصحيحة
Rational Number “Rational Numbers that can be written as a ratio of integers with nonzero denominator. Rational numbers are indicated by the symbol \mathbb{Q} .”	الأعداد النسبية
Irrational Numbers “Irrational numbers include numbers such as $\sqrt{2}$, $\frac{2-\sqrt{29}}{4}$, $\sqrt[3]{5}$, π , e , etc.”	الأعداد الغير نسبية
Real Numbers “Real Numbers includes all rational numbers, and irrational numbers”	الأعداد الحقيقية
Prime Numbers “A positive integer which has only two different factors, 1 and the number itself. For example, 2, 3, 5, 7, 11, 13, etc.”	الأعداد الأولية
Origin point “Is the point (0, 0). That is, the point of intersection of the x- and y-axes”	نقطة الأصل
Interval “The set of all real numbers between two given numbers.”	فترة
Infinity “A "number" which indicates a quantity, size, or magnitude that is larger than any real number. The number infinity is written as a sideways eight: ∞ . Negative infinity is written $-\infty$.” Note: Neither ∞ nor $-\infty$ is a real number	اللانهاية

Conjugate “The result of writing sum of two terms as a difference or vice-versa. Expression $x + 2$ Conjugate $x - 2$	المرافق
Absolute Value “The absolute value of a number is the distance between the number and the origin. Simply absolute value makes a negative number positive. The absolute value of x is written $ x $. We write $ -6 = 6$ and $ 8 = 8$.”	قيمه مطلقة
Variable “A quantity that can change or that may take on different values. <i>Variable</i> also refers to a letter or symbol representing such a quantity.’	متغير
Algebraic expression “A collection of variables, and real numbers using mathematical operations.”	مقدار جبري
Exponent “ x in the expression a^x . For example, 3 is the exponent in 2^3 .”	أس
Base in an Exponential Expression “ a in the expression a^x . For example, 2 is the base in 2^3 .”	أساس
Scientific Notation “A standardized way of writing real numbers. In scientific notation, all real numbers are written in the form $a \times 10^b$, where $1 \leq a < 10$ and b is an integer. For example, 351 is written 3.51×10^2 in scientific notation.”	الصيغة العلمية
Radical “The $\sqrt{\quad}$ symbol, which is used to indicate square roots or n th roots ($\sqrt[n]{\quad}$).”	الجذر التربيعي
Simplify “To use the rules of arithmetic and algebra to rewrite an expression as simply as possible.	بسط – اختصر
Even Numbers “An integer that is a multiple of 2. The even numbers are $\{ \dots, -4, -2, 0, 2, 4, 6, \dots \}$.”	الاعداد الزوجية
Odd Number “An integer that is not a multiple of 2. The odd numbers are $\{ \dots, -3, -1, 1, 3, 5, \dots \}$.”	الاعداد الفردية
Polynomial “The sum or difference of terms which have variables raised to positive integer powers and which have coefficients that may be real or complex. . For example $3x^4 + 2x^3 - x^2 - 5x - 2$.”	كثيرة الحدود
Coefficient “The number multiplied times a product of variables. For example, 123 is the coefficient in the term $123x^3y^2$ ”	معامل
Leading Term “The term in a polynomial which contains the highest power of the variable. For example, $5x^4$ is the leading term of $5x^4 - 6x^3 + 4x - 12$.”	حد اكبر قوه
Leading Coefficient “The coefficient of a polynomial's leading term”	معامل أكبر قوه

Function Operations “Definitions for combining functions by adding, subtracting, multiplying, dividing, and composing them.”	العمليات على الدوال
Monomial “A polynomial with one term. The following are all monomials: $5x^3$, 8, and $4xy$.”	أحادية الحدود
Binomial “A polynomial with two terms which are not like terms. The following are all binomials: $2x - 3$, $3x^5 + 8x^4$, and $2ab - 6a^2b^5$.”	ثنائية الحدود
Trinomial “A polynomial with three terms which are not like terms. The following are all trinomials: $x^2 + 2x - 3$, $3x^5 - 8x^4 + x^3$, and $a^2b + 13x + c$.”	ثلاثية الحدود
Factorization “The factorization of a polynomial is its representation as a product its factor For example, the factorization of $(x^2 - 4)$ is $(x - 2)(x + 2)$.”	التحليل
Perfect Square “Any number that is the square. For example, 0, 1, 4, 9, 16, 25, etc. are all perfect squares. So are $\frac{1}{25}$ and $\frac{9}{4}$.”	المربع الكامل
Domain “The set of values of the independent variable(s) x input.”	المجال
Range “The set of y-values of a function, dependent variable(s) y output	المدى
Cartesian Coordinates (Rectangular Coordinates) (x, y) or (x, y, z) coordinates.”	الإحداثيات الكارتيزية
Quadrants “The four sections into which the x-y plane is divided by the x- and y-axes. 	الأرباع
Midpoint “The point halfway between two given points.”	نقطة التنصيف
Right Triangle “A triangle which has a right (90°) interior angle”	مثلث قائم الزاوية
Equation “A mathematical sentence built from expressions using one or more equal signs (=).”	المعادلة
Function “A relation for which each element of the domain corresponds to exactly one element of the range”	دالة
Linear Equation “Is a algebraic expression contain “=” and the highest power is 1 also it’s graph is a straight line.”	معادلة خطية

Solve “Find all solutions to an equation, inequality, or a system of equations and/or inequalities.”	حل
Inequality “A mathematical sentence built from expressions using one or more of the symbols $<$, $>$, \leq , or \geq .”	متباينة
Solution or Solution Set “Any and all value(s) of the variable(s) that satisfies an equation, inequality, system of equations, or system of inequalities”	الحل أو مجموعة الحل
Y Intercept of a Straight Line “The Y intercept of a straight line is simply where the line crosses the Y axis.”	نقطة التقاطع مع محور Y
x Intercept of a Straight Line “The x intercept of a straight line is simply where the line crosses the x axis.”	نقطة التقاطع مع محور x
Symmetric “Describes a geometric figure or a graph consisting of two parts that are congruent to each other.”	التمائل
Linear Equation “Is a algebraic expression contain “=” and the highest power is 1 also it’s graph is a straight line.”	معادلة خطية
Constant Function “A function of the form $y = \text{constant}$ or $f(x) = \text{constant}$, such as $y = -2$.”	الدالة الثابتة
Quadratic Equation “n equation includes only second degree polynomials. Some examples are $25x^2 - 4 = 0$, $2x^2 - x - 28 = 0$ ”	المعادلة التربيعية
Rational Function “ function that can be written as a polynomial divided by a polynomial.”	الدالة الكسرية- النسبية
Complex Numbers “Numbers like $3 - 2i$ or $-1 + \sqrt{5}i$ that can be written as the sum or difference of a real number and an imaginary number. Complex numbers are indicated by the symbol \mathbb{C} .”	(الأعداد المركبة
Complex Conjugate “The complex conjugate of $a + bi$ is $a - bi$, and similarly the complex conjugate of $a - bi$ is $a + bi$.”	مرافق العدد المركب
Slope of a Line “A number which is used to indicate the steepness of a line, as well as indicating whether the line is tilted uphill or downhill. Slope is indicated by the letter m.”	ميل المستقيم
Parallel Lines “Two distinct lines that do not intersect. Note: Parallel lines have the same slope.	خطوط متوازية
Perpendicular lines “At a 90° angle. Note: Perpendicular lines have slopes that are negative reciprocals.”	خطوط متعامدة
Function “A relation for which each element of the domain corresponds to exactly one element of the range”	دالة
Domain “The set of values of the independent variable(s) x input.”	المجال
Range “The set of y-values of a function, dependent variable(s) y output”	المدى
Piecewise Function “A function that uses different formulas for different parts” of its domain.	دالة معرفة بأكثر من قاعدة
Vertical Line Test “A test use to determine if a relation is a function. A relation is a function if there are no vertical lines	اختبار الخط الرأسى

that intersect the graph at more than one point.	
Vertical Shift (Vertical Translation) “A shift in which a plane figure moves vertically”	إزاحة رأسية
Horizontal Shift (Horizontal Translation) “A shift in which a plane figure moves horizontally.”	إزاحة أفقية
Horizontal Reflection “A reflection in which a plane figure flips over horizontally.”	انعكاس رأسي
Vertical Reflection “A reflection in which a plane figure flips over vertically.”	انعكاس أفقي
Exponential Function “A function of the form $y = b^x$ where (b is positive real number) $b > 0$ and $b \neq 1$ ”	دالة أسية
Logarithmic Function “A function of the form $y = \log_b x$ where (b is positive real number) $b > 0$ and $b \neq 1, x > 0$ ”	الدالة اللوغارتمية
The Natural Logarithmic Function “A function of the form $y = \log_e x = \ln x, x > 0$ ”	الدالة اللوغارتمية الطبيعية
Sequences “A list of numbers set apart by commas, such as 1, 3, 5, 7, . . .”	المتتابعات
Arithmetic Sequence “A sequence such as 1, 5, 9, 13, 17 or 12, 7, 2, -3, -8, -13, -18 which has a constant difference between terms.”	المتابعة الحسابية
Geometric Sequence “A sequence such as 2, 6, 18, 54, 162 which has a constant ratio between terms. “	المتابعة الهندسية
Series “The sum of the terms of a sequence. For example, the series for the sequence 1, 3, 5, 7, 9, . . . , 131, 133 is the sum $1 + 3 + 5 + 7 + 9 + \dots + 131 + 133$.	المتسلسلات
Factorial n! (read n factorial) “is equal to the product of the integers from 1 to n.” $5! = 1 * 2 * 3 * 4 * 5$	المضروب
Sample space “Is a set of all possible outcomes”	فضاء العينة
Event “Is any subset of the sample space”	الحدث
Simple Event The event that contains only one outcome	الحدث البسيط
Probability is the chance that a particular event will happen “The probability of an event is expressed as a value between 0 and 1”	الاحتمال
Independent Events “Events for which the probability of any one event occurring is unaffected by the occurrence or non-occurrence of any of the other events. Formally, A and B are independent if and only if $P(A B) = P(A)$.”	الأحداث المستقلة

Fraction	كسور
Equivalent Fractions	كسور متكافئة
Exponents	أسس
Percent	نسبة مئوية
Decimals	أعداد عشرية
Percentage	نسبة مئوية
Increase	زيادة
Decrease	نقصان
Constant	ثابت
Variable	متغير
Coefficient	معامل
Terms	حدود
Equation	معادلة
Expressions	تعبير رياضي
Average (Arithmetic Mean)	متوسط حسابي
Average Speed	متوسط السرعة
Consecutive integers	اعداد صحيحة متتالية
Mean	متوسط
Median	وسيط
Mode	منوال
Probability	احتمال
Point	نقطة

Line	خط مستقيم
Line segment	قطعة مستقيمة
Midpoint	نقطة تنصيف
Ray	شعاع
Percentage	نسبة مئوية
Increase	زيادة
Plane	مستوى
Space	فراغ
Parallel Lines	خطوط مستقيمة متوازية
Perpendicular Lines	خطوط مستقيمة متعامدة
Angle	زاوية
Measuring	قياس
Side	ضلع
Right Angle	زاوية قائمة
Acute Angle	زاوية حاده
Obtuse Angle	زاوية منفرجة
Straight Angle	زاوية مستقيمة
Complementary Angle	زاوية متممة
Supplementary angle	زاوية مكملة
Vertical Angles	زوايا متقابلة بالرأس
Alternate Angles	زوايا متبادلة
Corresponding Angles	زوايا متناظرة

Right Triangle	مثلث قائم الزاوية
Acute Triangle	مثلث حادة الزوايا
Obtuse Triangles	مثلث منفرج الزوايا
Equilateral Triangle	مثلث متساوي الاضلاع
Isosceles Triangle	مثلث متساوي الساقين
Plane	مستوى
Space	فراغ
Parallel Lines	خطوط مستقيمة متوازية
Perpendicular Lines	خطوط مستقيمة متعامدة
Angle	زاوية
Measuring	قياس
Side	ضلع
Right Angle	زاوية قائمة
Acute Angle	زاوية حاده
Obtuse Angle	زاوية منفرجة
Straight Angle	زاوية مستقيمة
Complementary Angle	زاوية متممة
Supplementary angle	زاوية مكملة
Vertical Angles	زوايا متقابلة بالرأس
Alternate Angles	زوايا متبادلة
Corresponding Angles	زوايا متناظرة

Right Triangle	مثلث قائم الزاوية
Acute Triangle	مثلث حادة الزوايا
Obtuse Triangles	مثلث منفرج الزوايا
Equilateral Triangle	مثلث متساوي الاضلاع
Scalene Triangle	مثلث مختلف الاضلاع
Triangle Inequality	متباينة المثلث
Quadrilateral	شكل رباعي
Parallelogram	متوازي اضلاع
Rhombus	معين
Rectangle	مستطيل
Square	مربع
Trapezoid	شبه منحرف
Polygon	مضلع
Pentagon	مضلع خماسي
Hexagon	مضلع سداسي
Octagon	مضلع ثماني
Regular polygon	مضلع منتظم
Area	مساحة
Area of Triangle	مساحة المثلث
Perimeter	محيط
Perimeter of Triangle	محيط المثلث
Circle	دائرة

Diameter	قطر الدائرة
Radius	نصف قطر الدائرة
Radii	انصاف أقطار الدائرة
Circumference of a circle	محيط الدائرة
Area of a circle	مساحة الدائرة
Arc	قوس
Length of Arc	طول القوس
Tangent	مماس
Chord	وتر
Vertex	رأس
Cyclic quadrilateral	شكل رباعي دائري
Cube	مكعب
Surface area of a cube	مساحة جانبية للمكعب
Volume of the cube	حجم المكعب
Rectangular	متوازي المستطيلات
Prism	منشور
Cylinder	أسطوانة
Sphere	كرة
Cone	مخروط
Pyramid	هرم
Coordinate	احداثي
Slope	ميل

Y-intercept y	الجزء المقطوع من محور
X-intercept X	الجزء المقطوع من محور
Natural numbers	أعداد طبيعية
Whole numbers	أعداد كلية
Rational numbers	أعداد نسبية
Irrational numbers	أعداد غير نسبية
Real numbers	أعداد حقيقية
Square root	جذر تربيعي
Perfect square	مربع كامل
Cube root	جذر تكعيبي
Even numbers	أعداد زوجية
Odd numbers	أعداد فردية
Prime Numbers	أعداد أولية
Addition	جمع
Subtraction	طرح
Multiplication	ضرب
Division	قسمة
Parenthesis	أقواس
Rounding Numbers	تقريب الأعداد
Absolute Value	قيمة مطلقة