



Matisto's Subjects

Algebra

1. Negative numbers

Subject	Example
Number axis	$x = 2.5$
Order on axis	$-3 < -2$
Sum on axis	$5 + (-3)$
Actions: + and -	$-1 - (-2) + 6$
Actions: * and :	$(-2) * (-2)$
Notion of power	2^7

2. Polynomials

Subject	Example
Multiplying terms I	$12*(7M + 8)$
Multiplying terms II	$(X + 3)*(X - 5)$
Combining like terms	$13M + 7M - 12M + 8M$
Combining like terms II	$(-11 + 9X) + 6X$
Algebraic Expressions	$(A + 8)*(A - 8)$
Algebraic Expressions II	$(-A + 5)^2$
Dividing terms	$(-110X + 176Y^2)/11$
Common Factor	$15X + 9$

3. Simple Equations

Subject	Example
Guessing	$3x+5=17$
Simple Equation	$8X-5=27$
Simple Equation II	$5*(2X + 4) = 4X+44$
Fractions	$2x/3 = 3x-2/4$

4. Equations System

Subject	Example
Equation Systems - Graphical	$5x+2y-10=0 ; 7=y+3x$
Equation Systems - Substitution	
Equation Systems - Elimination	

5. Quadratic Equations

Subject	Example
Quadratic Equations	$X^2-7X+12=0$
Quadratic Equations – parenthesis	$4X - 16 = X*(-4 + X)$
Quadratic Equations – Multiple Paren	$(2X + 2)*(2X + 2) = 3X*(4 + X)$
Quadratic Equation Systems	$-16X+16=4Y; -92=4X^2+48X+Y$

6. Inequalities

Subject	Example
Linear inequalities	$8X+13\leq-75$
Linear inequalities 2	$3*(2X+4)\geq 3X+24$
Double Inequalities	$13\leq 2X+3\leq 19$
Polynomial Inequalities	$(1+X)(x-3)(X+7)\geq 0$



7. Powers

Subject	Example
Powers 1	$x^2x^3=...$
Powers 2	$(x^2)^3=...$
Powers 3	$(xy)^2=...$

8. Word Problems

Subject
2 Numbers
Buying Problems
Percentage
Rectangles and Squares
Pythagoras
Circles
Cylinder
Cartesian Geometry

Geometry

Subject	Example
Positioning	$(-2.5, -10)$
XY Coordinates	$X=4, y=6$
Middle Point	$A(1, 3), B(5, 7)$
Linear Equation Graph	$y = mx + n$
Intersections	$Y = X - 4$
m + point	$A(5, 5), m=4$
Two points	$A(2, 3), A(2, 3)$
Line + points	$A(2, 5), A(5, 8), C(7, 3)$
Parabola	$Y = -X^2 + 8X - 15$

Trigonometry

Subject	Example
Sinus	$AB = 18, AC = 7, \sin\alpha=?$
Cosines	$AB = 19, AC = 10, \cos\alpha=?$
Perpendicular	$AB = 199.38, \alpha = 67^\circ, AC=?$
Tangent	$AC = 8, BC = 14, \tan\alpha=?$
Angle	$AC = 220, BC = 240, \alpha=?$
Triangle Area	$AC = 8, BC = 14, \alpha=90^\circ, S=?$

Probability

Subject
Basic probability
Basic techniques
Tables and probability
Multiplication of probabilities