Measurement
Conversion Factors

$$400\,m \times \boxed{\frac{100cm}{1\,m}} = \boxed{40000cm}$$

Surface Area and Volume
Net (Flat) Areas
Formulas

Trigonometry
SOH CAH TOA

$$\sin\theta = \frac{opp}{hyp} \qquad \theta = \sin^{-1}\left(\frac{opp}{hyp}\right)$$

$$\cos\theta = \frac{adj}{hyp} \qquad \theta = \cos^{-1}\left(\frac{adj}{hyp}\right)$$

$$\tan\theta = \frac{opp}{adj} \qquad \theta = \tan^{-1}\left(\frac{opp}{adj}\right)$$

Exponent
Laws $+\ -\ \times$
Negative Coefficients/Brackets
Fraction/Radical(Root) Form
Change of Base

Radicals
Laws
Mixed Roots
Entire Roots

Polynomials
Distribution
FOIL
Factoring
GCF

$$\underline{\quad} \times \underline{\quad} = ac$$
$$\underline{\quad} + \underline{\quad} = b$$

$a = 1$
$a \neq 1$
$a^2 - b^2$
Let $m =$

GCF of "1" and "(-1)"

Greatest Common Factor -1:
$-2x + 3 =$
$$\boxed{-1(2x-3)}$$

$5 - x =$
$-1(-5 + x) =$
$$\boxed{-(x-5)}$$

Graphing

Domain : x Range : y
Words: Any real number less than 10
Interval Notation: $(-\infty, 10)$
Set Notation: $\{x|x < 10, x\epsilon R\}$
Number Line:
List: $x = 1,2,3,4 \ or \ (2,4)(5,6)$ 10

$(x_1, y_1) \qquad (x_2, y_2)$
$(2, -4) \qquad (-1, -2)$

Slope Formula

$$\boxed{m = \frac{y_2 - y_1}{x_2 - x_1}}$$

$$Slope = m = \frac{rise}{run}$$

TOV

$$\boxed{y = mx + b}$$ Slope Intercept

$$\boxed{y - y_1 = m(x - x_1)}$$ Slope Point

$$\boxed{Ax + By + C = 0}$$ General/Standard

$$\boxed{f(x) = mx + b}$$ Function Notation

Distance Formula

$$d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$$

$$c = \sqrt{a^2 + b^2} \quad ; Pythag$$

$$Midpoint = \left(\frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2}\right)$$

M8-9 Methods

Bedmas/# Forms
Substitution, let m = #
Algebra/Fractions/LCD
TOV
Exponents/Geometry
Distribution/FOIL
Inequalities

Systems

Substitution
$a = b \quad c = a$
$\quad b = c$

Substitution:
Isolate
Substitute
Solve
Substitute
Solve
Intersection (x, y)

Word Problems
Let Statements
Equations
Solve

Elimination
EQ1
$-$ EQ2 $\times$ 2
EQ3

Elimination:
Get rid of the fractions
Line up the terms
Multiply
Add or subtract
Solve
Substitute
Solve
Intersection (x, y)

$\# \neq \# \ No \ sol'n$
$\# = \# \ Infinite \ Sol'ns$