WAEC/JAMB Mathematics Study Plan

General Approach
- **Duration:** 8 weeks (can be repeated/refined)
- **Daily Time:** 1–2 hours (focused practice)
- **Weekly Cycle:**

Day 1–3 → Learn & Revise Concepts/Formulas
Day 4–5 → Practice Questions (Past Questions)
Day 6 → Mock timed practice
Day 7 → Review mistakes + light revision

Week	Focus
Week 1: Number & Numeration	Fractions, Decimals, Approximation, Percentages, Ratios Formulas: SI, CI, Percent Change, Ratio problems Practice: 20+ past questions
Week 2: Algebra	Expansion, Factorization, Quadratics, Inequalities Formulas: Quadratic formula, nth term, sum of AP/GP Practice: Past algebra questions
Week 3: Geometry & Trigonometry (Part 1)	Coordinate Geometry: slope, midpoint, distance, line equation Plane Geometry: angles, polygons, circle theorems Practice: Diagram-based questions
Week 4: Geometry & Trigonometry (Part 2)	Trigonometric ratios, Identities, Bearings, Mensuration Practice: Word problems + geometry diagrams
Week 5: Calculus & Graphs	Differentiation, Integration, Graph sketching Practice: 10 graph questions under exam conditions
Week 6: Statistics & Probability	Mean, Median, Mode, Probability, Variance, SD Practice: 15+ questions + 1 data set problem
Week 7: Revision & Mixed Practice	Review all topics, solve mixed past questions Identify weak areas
Week 8: Final Exam Prep	3–4 full past papers under timed conditions Review mistakes + focus on weak spots

Extra Tips
- Revise formula sheet daily.
- Keep an error notebook for mistakes.
- Practice timed sessions (JAMB = 60 questions in 40 mins).
- Consistency is key: 1 hour daily beats cramming.

Numeration

Fraction, Approximation & Significant Figures

Percentage = $\frac{\text{Part}}{\text{Whole}}$ x 100

Error Bound formula: $\text{Error} = \pm\frac{1}{2} \times \text{Place Value}$

where: Place Value = the value of the last digit kept (e.g., nearest 10 → place value = 10)

Indices(Power)

Rules of Indices
For $a \neq 0, b \neq 0$

Rule	Example
$a^x \times a^y = a^{x+y}$	$a^3 \times a^2 = a^{3+2} = a^5$
$a^x \div a^y = a^{x-y}$	$a^6 \div a^2 = a^{6-2} = a^4$
$(a^x)^y = a^{xy}$	$(a^2)^3 = a^{2\times3} = a^6$
$a^0 = 1$	$a^0 = 1$
$a^{-x} = \frac{1}{a^x}$	$a^{-5} = \frac{1}{a^5}$
$a^{\frac{x}{y}} = \sqrt[y]{a^x} = (\sqrt[y]{a})^x$	$a^{\frac{3}{5}} = \sqrt[5]{a^3} = (\sqrt[5]{a})^3$

Ratios, Proportion & Rates

Percentage Change:

$$\%\text{Change} = \frac{\text{New Value} - \text{Old Value}}{\text{Old Value}} \times 100$$

Profit & Loss:

$$\text{Profit} = \text{SP} - \text{CP}, \quad \text{Loss} = \text{CP} - \text{SP}$$

$$\%\text{Profit} = \frac{\text{Profit}}{\text{CP}} \times 100, \quad \%\text{Loss} = \frac{\text{Loss}}{\text{CP}} \times 100$$

Simple Interest (SI):

$$SI = \frac{P \times R \times T}{100}$$

Compound Interest (CI):

$$A = P\left(1 + \frac{R}{100}\right)^T, \quad CI = A - P$$

Depreciation:

$$V = P\left(1 - \frac{r}{100}\right)^T$$

Appreciation:

$$V = P\left(1 + \frac{r}{100}\right)^T$$

where: P = Principal (initial amount)
R,r = Rate of interest/appreciation/depreciation (%)
T = Time (years, unless stated otherwise)
A = Final/total amount after interest
CI = Compound interest earned
SI = Simple interest earned
V = Value after depreciation/appreciation
SP = Selling Price
CP = Cost Price

Rules of Logarithm

Rule 1: $\log_b(M \cdot N) = \log_b M + \log_b N$

Rule 2: $\log_b\left(\frac{M}{N}\right) = \log_b M - \log_b N$

Rule 3: $\log_b(M^k) = k \cdot \log_b M$

Rule 4: $\log_b(1) = 0$

Rule 5: $\log_b(b) = 1$

Rule 6: $\log_b(b^k) = k$

Rule 7: $b^{\log_b(k)} = k$

Where: $b > 1$, and M, N and k can be any real numbers but M and N must be positive!

Surds

1) $\sqrt{a}\sqrt{a} = a$

2) $a\sqrt{b} \times a\sqrt{b} = a^2 \times b$

3) $\sqrt{a \times b} = \sqrt{a}\sqrt{b}$

4) $\sqrt{\frac{a}{b}} = \frac{\sqrt{a}}{\sqrt{b}}$

5) $\frac{a}{\sqrt{b}} = \frac{a}{\sqrt{b}} \times \frac{\sqrt{b}}{\sqrt{b}} = \frac{a\sqrt{b}}{b}$

6) $a\sqrt{c} \pm b\sqrt{c} = (a \pm b)\sqrt{c}$

7) $\frac{a}{b + c\sqrt{n}}$ rationalize denominator by multiplying by $\frac{b - c\sqrt{n}}{b - c\sqrt{n}}$

$\frac{a}{b - c\sqrt{n}}$ rationalize denominator by multiplying by $\frac{b + c\sqrt{n}}{b + c\sqrt{n}}$

Ratios, Proportion & Rates

Ratio relation:

$$\frac{a}{b} = \frac{c}{d}$$

Direct Proportion: $y \propto x \Rightarrow y = kx$

Inverse Proportion: $y \propto \frac{1}{x} \Rightarrow y = \frac{k}{x}$

Speed/Rate formulas:

$$\text{Speed} = \frac{\text{Distance}}{\text{Time}}, \quad \text{Distance} = \text{Speed} \times \text{Time}, \quad \text{Time} = \frac{\text{Distance}}{\text{Speed}}$$

where:
a,b,c,d = terms in the ratio
kkk = constant of proportionality
x,yx, yx,y = related variables
Distance = how far object travels
Speed = rate of movement (Distance per unit time)
Time = duration of travel

Algebra

Slope of a Line

Let (x1, y1) and (x2, y2) be two points on the line.

$$\text{Slope} = m = \frac{\text{change in } y}{\text{change in } x} = \frac{y_2 - y_1}{x_2 - x_1}$$

Quadratic Formula

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

when $ax^2+bx+c=0$

Note: $ax^2+bx+c=0$ and a $\neq$ 0

Equations of Lines

Standard Form: Ax + By = C

Slope-Intercept Form: y = mx + b
where m = slope and b = y – intercept

Point-Slope Form: $y - y_1 = m(x - x_1)$

Distance Formula

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

d = distance between points (x1, y1) and (x2, y2).

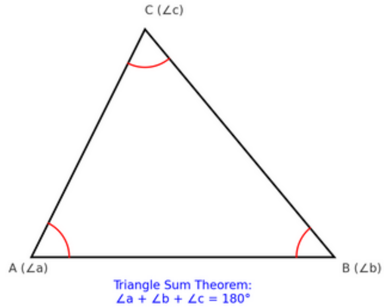
Midpoint Formula

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

Where:
M = Midpoint
x_1, x_2 = x-coordinates
y_1, y_2 = y-coordinates

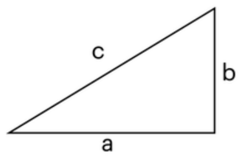
Triangle Sum Theorem

The sum of the three interior angles in a triangle is always
180°: ∠a + ∠b + ∠c = 180°



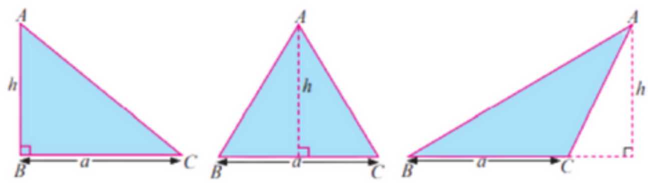
Pythagorean Theorem

In any right triangle, the sum of the squares of the legs is equal to the square of the hypotenuse: $a^2 + b^2 = c^2$



$$c^2 = a^2 + b^2$$

Area of a Triangle



Area = $\frac{1}{2}$ × **Base** × **Perpendicular height**
(a) **(h)**

Geometry & Trigonometry

Plane Geometry

Sum of polygon angles: (n-2)180°

Interior angle (regular): $\frac{(n-2)180°}{n}$

Exterior angle (regular): $\frac{360°}{n}$

where n= number of sides

Circle Geometry

Circumference: $C = 2\pi r$

Area: $A = \pi r^2$

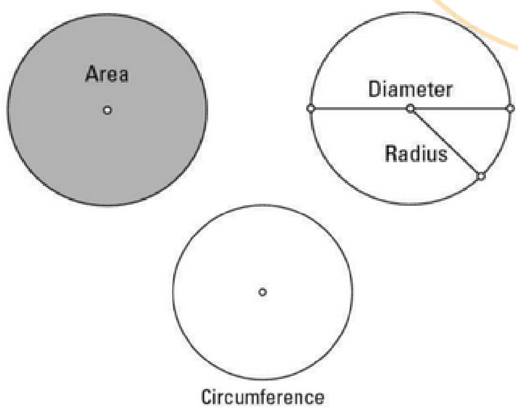
Arc length: $L = \frac{\theta}{360°} \cdot 2\pi r$

Sector area: $A = \frac{\theta}{360°} \cdot \pi r^2$

Where: r = radius, θ = central angle.

π = 3.14 or 22/7

d = diameter of a circle



Trigonometry

SOHCAHTOA:

$\sin\theta = \frac{\text{opp}}{\text{hyp}}, \cos\theta = \frac{\text{adj}}{\text{hyp}}, \tan\theta = \frac{\text{opp}}{\text{adj}}$

Pythagoras: $a^2 + b^2 = c^2$

Sine Rule: $\frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}$

Cosine Rule: $c^2 = a^2 + b^2 - 2ab\cos C$

Area of Triangle: $A = \frac{1}{2}ab\sin C$

Where: a, b, c = sides; A, B, C = opposite angles.

Bearings & Heights

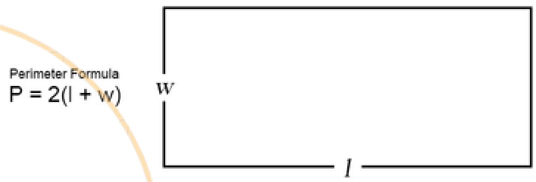
Bearings are measured **clockwise from North (0°–360°)**.

Right triangle trig is applied:

$$\tan\theta = \frac{\text{Height}}{\text{Distance}}$$

Perimeter

To find the perimeter of any polygon, excluding circles, you simply add up all of its sides. For example:



Note: The perimeter of a circle is its circumference.

Time

1 day	24 hours
1 hour (hr)	60 minutes (min)
1 minute	60 secs
1 week	7 days
1 year (yr)	365.25 days
1 year (yr)	12 months
1440 minutes	1 day
3600 seconds	1 hour

Polygon

Shape	No of sides	Sum of Interior angles
Triangle	3	180 degrees
Quadrilateral	4	360 degrees
Pentagon	5	540 degrees
Hexagon	6	720 degrees
Heptagon	7	900 degrees
Octagon	8	1080 degrees
Any Polygon	n	S = 180(n – 2)

Distance, Rate, and Time Formula

$d = rt$

d = distance,
r = rate
t = time

Rate and time must be in proportional units (e.g., if rate is given in terms of miles per hour)

Modular Arithmetic

$a \equiv b (\mathrm{mod}\, n)$

means a and b give the same remainder when divided by n.

Where:
a, b = integers
n = modulus (positive integer)

Example: $17 \equiv 2 \ (\mathrm{mod}\, 5)$ because both leave remainder 2 when divided by 5.

Number Bases

A base tells you how many unique digits are used in a number system.
Base 10 (Decimal): uses digits 0–9
Base 2 (Binary): uses digits 0–1
Base 5: uses digits 0–4, etc.

$$N = (d_n d_{n-1} \dots d_1 d_0)_b = d_n b^n + d_{n-1} b^{n-1} + \dots + d_1 b^1 + d_0 b^0$$

Where:
b = base
d = digits (must be less than b)

Example:

Convert $(243)_5$ to base 10:

$$(243)_5 = 2 \times 5^2 + 4 \times 5^1 + 3 \times 5^0 = 50 + 20 + 3 = (73)_{10}$$

Weight and Mass

1 Ton (T)	2,000 pounds
1 pound (lb)	16 ounces (oz)

Perfect Squares

$1^2 = 1$	$2^2 = 4$	$3^2 = 9$	$4^2 = 16$
$5^2 = 25$	$6^2 = 36$	$7^2 = 49$	$8^2 = 64$
$9^2 = 81$	$10^2 = 100$	$11^2 = 121$	$12^2 = 144$
$13^2 = 169$	$14^2 = 196$	$15^2 = 225$	$16^2 = 256$
$17^2 = 289$	$18^2 = 324$	$19^2 = 361$	$20^2 = 400$

Linear Units

12 inches (in)	1 foot (ft)
3 feet	1 yard (yd)
36 inches	1 yard
63,360 inches	1 mile (mi)
5,280 feet	1 mile
1,760 yards	1 mile
1440 minutes	1 day

Capacity

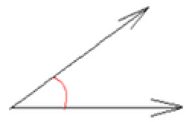
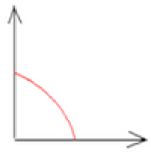
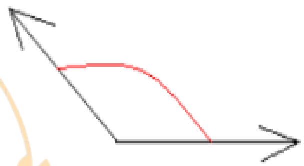
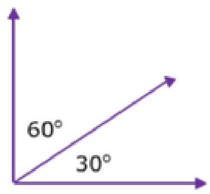
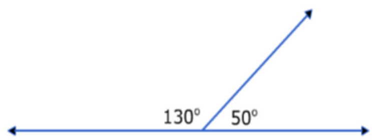
8 fluid ounces	1 cup
2 cups	1 pint (pt)
2 pints	1 quart (qt)
4 quarts	1 mile (mi)

Converting Units

Larger unit → smaller unit	*Multiply*
Smaller unit → Larger unit	*Divide*

Fractions	
Adding and Subtracting Fractions	$\frac{a}{b}+\frac{c}{d}=\frac{(a\cdot d)+(c\cdot b)}{b\cdot d}$
Multiplying Fractions(Multiply straight across)	$\frac{a}{b}\cdot\frac{c}{d}=\frac{a\cdot c}{b\cdot d}$
Dividing Fractions(Keep, Change, Flip)	$\frac{a}{b}\div\frac{c}{d}=\frac{a\cdot d}{b\cdot c}$
Converting Mixed Numbers to Improper Fractions	$A\frac{b}{c}=\frac{(A\cdot c)+b}{c}$

Laws of Exponents	
Zero-Exponent Rule $a^0 = 1$ Anything raised to the zero power is 1.	$3^0 = 1$ $(5x^3y^4)^0 = 1$
Power Rule $(a^m)^n = a^{mn}$ To raise a power to a power you need to multiply the exponents.	$(x^5)^4 = x^{20}$ $(2x^4y^2)^3 = 2^3x^{12}y^6 = 8x^{12}y^6$
Negative Exponent Rule $a^{-n} = \frac{1}{a^n}$ Negative exponents in the numerator get moved to the denominator and become positive exponents. Negative exponents in the denominator get moved to the numerator and become positive exponents.	$5^{-2} = \frac{1}{5^2} = \frac{1}{25}$ $4x^{-2} = \frac{4}{x^2}$ $\frac{x^{-3}}{y^{-7}} = \frac{y^7}{x^3}$
Product Rule $a^m \cdot a^n = a^{m+n}$ To multiply two exponents with the same base, you keep the base and add the powers.	$x \cdot x^5 = x^6$ $y^4 \cdot y^9 = y^{13}$
Quotient Rule $\frac{a^m}{a^n} = a^{m-n}$ To divide two exponents with the same base, you keep the base and subtract the powers.	$\frac{x^5}{x^3} = x^2$ $\frac{y^4}{y^9} = \frac{1}{y^5}$ $\frac{x^3y^2}{x^2y^5} = \frac{x}{y^3}$

Angle Types & Special Angle Pairs	
Acute Angle: An angle whose measure is less than 90 degrees.	
Right angle: An angle whose measure is 90 degrees.	
Obtuse angle: An angle whose measure is bigger than 90 degrees but less than 180 degrees.	
Straight angle: An angle whose measure is 180 degrees. Thus, a straight angle looks like a straight line.	
Complementary angles: Two angles that have a sum of 90 degrees. $\angle 1 + \angle 2 = 90^\circ$	
Supplementary angles: Two angles that have a sum of 180 degrees. $\angle 1 + \angle 2 = 180^\circ$	

Prime Numbers & Divisibility Rules		
A number is divisible by...	**Divisible**	**Not Divisible**
2 – if the last digit is even (0, 2, 4, 6, or 8).	3,978	4,975
3 – if the sum of the digits is divisible by 3.	315 = 3 + 1 + 5 = 9	139 = 1 + 3 + 9 = 13
4 – if the last two digits are divisible by 4.	8,512	7,511
5 – if the last digit is 0 or 5.	14,975	10,999
6 – if the number is divisible by both 2 and 3.	48	20
9 – if the sum of the digits is divisible by 9.	711 = 7 + 1 + 1 = 9	93 = 9 + 3 = 12
10 – if the last digit is 0.	15,990	10,536

Multiplication Rules

The product and the quotient of one
and any number is that number.

7 x 1 = 7
100 ÷ 1 = 100

Zero times any number equals zero.

0 × 2 = 0
858 x 0 = 0

Zero divided by any nonzero number is zero
.
0 ÷ 3 = 0

Dividing a number by zero is undefined.

$\frac{5}{0} = \text{undefined}$

When multiplying or dividing with positives and negatives, use the signs charts.

Multiplication/Division Sign Chart

+	+	+
+	-	-
-	+	-
-	-	+

Basic Probability

1. For any event A: $0 \leq P(A) \leq 1$
2. P(impossible event) = 0.
3. P(sure event) = 1.
4. $P(A) = \frac{\text{Desired outcome}}{\text{Total number of outcomes}}$
5. P(not A) = 1 - P(A)
6. P(A and B) = P(A) x P(B) Independent (Replacement) vs. Dependent Events (No Replacement)
7. P(A or B) = P(A) + P(B) (Exclusive Events)
8. P(A or B) = P(A) + P(B) – P(A and B) (Non-Exclusive Events)

Properties of Radicals

A. $a^{\frac{1}{n}} = \sqrt[n]{a}$ Example: $x^{\frac{1}{3}} = \sqrt[3]{x}$

B. $a^{\frac{m}{n}} = \sqrt[n]{a^m} = \left(\sqrt[n]{a}\right)^m$ Example: $x^{\frac{2}{3}} = \sqrt[3]{x^2} = \left(\sqrt[3]{x}\right)^2$

C. $\sqrt[n]{a^n} = a^{\frac{n}{n}} = a^1 = a$ Examples: $\sqrt{x^2} = x$ $\sqrt[5]{x^5} = x$

D. $\sqrt[n]{ab} = \sqrt[n]{a} \cdot \sqrt[n]{b}$

Examples:

1. $\sqrt{36y^4} = \sqrt{36} \cdot \sqrt{y^4} = 6y^2$
2. $\sqrt{72y^5} = \sqrt{36y^4} \cdot \sqrt{2y} = 6y^2\sqrt{2y}$
3. $\sqrt[3]{48y^7} = \sqrt[3]{8y^6} \cdot \sqrt[3]{6y} = 2y^2\sqrt[3]{6y}$

E. $\sqrt[n]{\frac{a}{b}} = \frac{\sqrt[n]{a}}{\sqrt[n]{b}}$ $b \neq 0$

Examples:

1. $\sqrt{\frac{9}{16}} = \frac{\sqrt{9}}{\sqrt{16}} = \frac{3}{4}$ 2. $\sqrt{\frac{x^2}{4y^2}} = \frac{\sqrt{x^2}}{\sqrt{4y^2}} = \frac{x}{2y}$

Statistics

$$\textbf{Mean} = \frac{\text{Sum of all Data Points}}{\text{Number of Data Points}}$$

Range = Maximum Value – Minimum Value

Mode = The value in the data set that occurs the most often

Median = The value in the middle of the data set

To find the median of a data set, arrange the observations in order from smallest to largest value. If there is an odd number of observations, the median is the middle value. If there is an even number of observations, the median is the average of the two middle values.

Differentiation

Power Rule:

$$\frac{d}{dx}(x^n) = nx^{n-1}, \quad n \in \mathbb{R}$$

where n = exponent of x.

Constant Rule:

$$\frac{d}{dx}(c) = 0$$

where c = constant.

Constant Multiple Rule:

$$\frac{d}{dx}[cf(x)] = cf'(x)$$

Sum & Difference Rule:

$$\frac{d}{dx}[f(x) \pm g(x)] = f'(x) \pm g'(x)$$

Product Rule:

$$\frac{d}{dx}[f(x)g(x)] = f'(x)g(x) + f(x)g'(x)$$

Quotient Rule:

$$\frac{d}{dx}\left(\frac{f(x)}{g(x)}\right) = \frac{f'(x)g(x) - f(x)g'(x)}{(g(x))^2}$$

Chain Rule:

$$\frac{dy}{dx} = \frac{dy}{du} \cdot \frac{du}{dx}$$

Standard Derivatives:

$$\frac{d}{dx}(\sin x) = \cos x, \quad \frac{d}{dx}(\cos x) = -\sin x, \quad \frac{d}{dx}(e^x) = e^x, \quad \frac{d}{dx}(\ln x) = \frac{1}{x}$$

Integration

Power Rule:

$$\int x^n dx = \frac{x^{n+1}}{n+1} + C, \quad (n \neq -1)$$

Constant Rule:

$$\int c\, dx = cx + C$$

Sum & Difference Rule:

$$\int [f(x) \pm g(x)] dx = \int f(x) dx \pm \int g(x) dx$$

Standard Integrals:

$$\int e^x dx = e^x + C, \quad \int \frac{1}{x} dx = \ln|x| + C$$

$$\int \sin x dx = -\cos x + C, \quad \int \cos x dx = \sin x + C$$

Definite Integral:

$$\int_a^b f(x) dx = F(b) - F(a)$$

where $F(x)$ is the antiderivative of $f(x)$.

Variance & Standard Deviation

◆ Variance

Variance measures how far data values spread from the mean.

- **Population Variance** (σ^2):

$$\sigma^2 = \frac{\sum(x_i - \mu)^2}{N}$$

where x_i *= data values,* μ *= population mean,* N *= total number of values.*

- **Sample Variance** (s^2):

$$s^2 = \frac{\sum(x_i - \bar{x})^2}{n-1}$$

where $\bar{x}$ *= sample mean,* n *= sample size.*

- **Shortcut Formula** (for speed in exams):

$$\sigma^2 = \frac{\sum x_i^2}{N} - \mu^2, \quad s^2 = \frac{\sum x_i^2}{n-1} - \frac{(\sum x_i)^2}{n(n-1)}$$

◆ Standard Deviation

- **Definition**: Square root of variance.

$$\sigma = \sqrt{\sigma^2}, \quad s = \sqrt{s^2}$$

- **In words**: SD tells us the "average distance" each data point is from the mean.

Like Terms

Like terms have the same letter variables and are raised to same powers. Like terms can be combined
into a single term.

Like Terms	Not Like Terms
$2x$ and $-5x$	$6x$ and $6y$
$2a^2$ and $-5a^2$	y and $6y^2$
$-2xy^2$ and $8xy^2$	X and 7

Adding and Subtracting Polynomials

When **adding polynomials**, you simply combine **like terms**. For example:

$$(x^2 - x + 5) + (6x^2 + 2x - 10)$$

$$\begin{array}{rrrr} & x^2 & - x & + 5 \\ + & 6x^2 & + 2x & - 10 \\ \hline & 7x^2 & + x & - 5 \end{array}$$

When **subtracting polynomials**, you rewrite subtraction as addition by distributing the negative sign to every term in the second polynomial and then combine **like terms**. For example:

$$(3x^2 - 8x + 7) - (2x^2 - 6x + 12)$$

$$= (3x^2 - 8x + 7) + (-2x^2 + 6x - 12)$$

$$\begin{array}{rrrr} & 3x^2 & - 8x & + 7 \\ + & -2x^2 & + 6x & - 12 \\ \hline & x^2 & - 2x & - 5 \end{array}$$

Factorials

n! = n x (n - 1) x (n - 2) x ... x 1

0! = 1
1! = 1
2! = 2 x 1 = 2
3! = 3 x 2 x 1 = 6
4! = 4 x 3 x 2 x 1 = 24
5! = 5 x 4 x 3 x 2 x 1 = 120
6! = 6 x 5 x 4 x 3 x 2 x 1 = 720
7! = 7 x 6 x 5 x 4 x 3 x 2 x 1 = 5,040

$$\frac{9!}{3!}$$

Step 1 — expand and cancel:

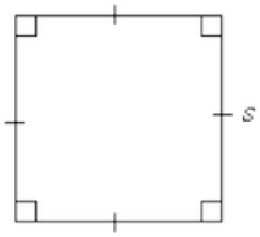
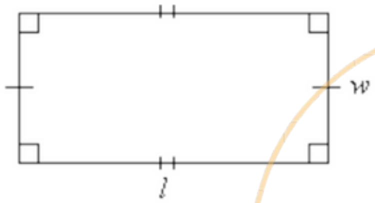
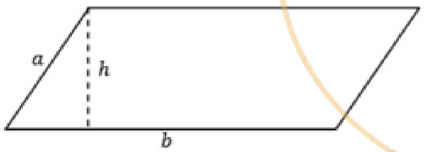
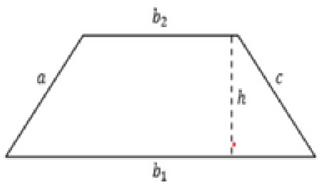
$$9! = 9 \times 8 \times 7 \times 6 \times 5 \times 4 \times 3 \times 2 \times 1$$

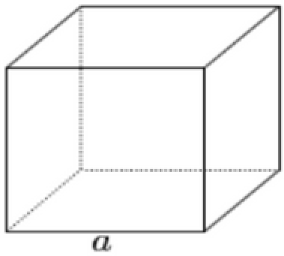
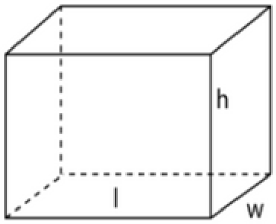
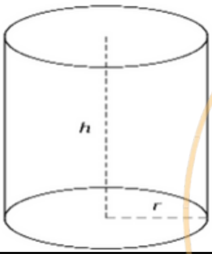
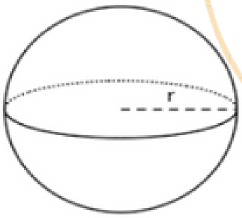
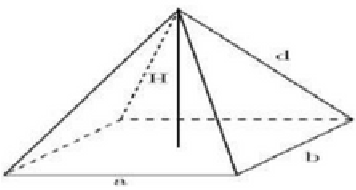
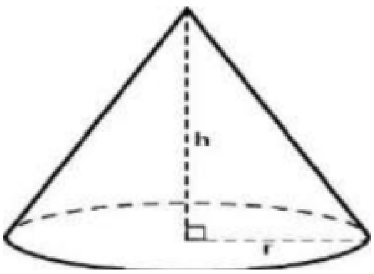
$$3! = 3 \times 2 \times 1$$

Cancel the $3 \times 2 \times 1$ factor:

$$\frac{9!}{3!} = \frac{9 \times 8 \times 7 \times 6 \times 5 \times 4 \times \cancel{3 \times 2 \times 1}}{\cancel{3 \times 2 \times 1}} = 9 \times 8 \times 7 \times 6 \times 5 \times 4$$

$$\frac{9!}{3!} = 60480$$

Quadrilaterals	
Square  	Perimeter: $P = 4s$ Area: $A = s^2$ Note: To find the perimeter of any quadrilateral, you simply add up all of its sides.
Rectangle  	Perimeter: $P = 2l + 2w$ Area: $A = lw$ Note: To find the perimeter of any quadrilateral, you simply add up all of its sides.
Parallelogram  	Perimeter: $P = 2a + 2b$ Area: $A = bh$ Note: To find the perimeter of any quadrilateral, you simply add up all of its sides.
Trapezoid  	Perimeter: $P = a + b_1 + c + b_2$ Area: $A = \frac{1}{2}(b_1 + b_2) \cdot h$ Note: To find the perimeter of any quadrilateral, you simply add up all of its sides.

Formulas for Volume (V) and Surface Area (SA)	
Cube 	$V = a^3$ $SA = 6a^2$
Rectangular Solid 	V = l x w x h SA = 2(l x w) + 2(w x h) + 2(h x l) l = length w = width h = height
Cylinder 	$V = \pi r^2 h$ $SA = 2\pi rh + 2\pi r^2$
Sphere 	$V = \frac{4}{3}\pi r^3$ $SA = 4\pi r^2$
Rectangular Pyramid 	$V = \frac{1}{3}\,abh$ Note: ab is the area of the base of the pyramid
Cone 	$V = \frac{1}{3}\pi r^2 h$