

REMEMBER TO ROUND THE DECIMALS!!!

E.g. 1.27969 would round to 1.28

Similarity and Congruence

Terms

Congruent Shapes Similar shapes that have been moved in some way

Rotation The shape has been turned over

Reflection The shape has been flipped over as if it was reflected in a mirror

Translation The shape keeps its same orientation, but it has been simply moved

Probability

Radicals and Pythagoras

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

Statistics

Types of Data

Categorical A collection of information that is divided into groups.

Numerical Data in the form of numbers.

Terms

Range Biggest number - smallest number

Terms Sum of all values divided by the number of values.

Median The middle number of a numerical data set. If there are 2 medians use this formula: $(a+b) / 2$

Mean Sum of all values divided by the number of values.

Mode The number with the highest frequency (most occurring).

/ = divide



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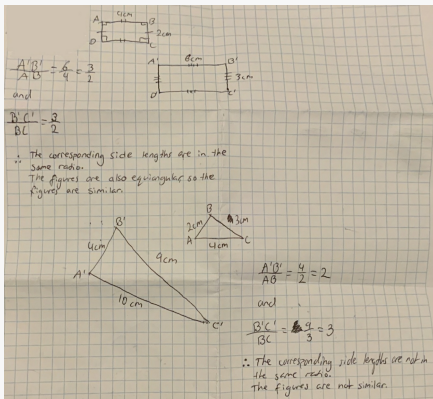
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Similarity and Congruence



$$\frac{A'B'}{AB}$$

$$\frac{B'C'}{BC}$$

Coordinate Geometry

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

Midpoint $((x_1 + x_2) / 2, (y_1 + y_2) / 2)$
 Formula:

Gradient $y_2 - y_1 / x_2 - x_1$
 Formula:

/ = fraction (divide)

Distance Formula

Distance formula

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

d = distance
 (x_1, y_1) = coordinates of the first point
 (x_2, y_2) = coordinates of the second point

Midpoint Formula

The Midpoint Formula

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

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

Gradient Formula

Slope of a line

$$m = \frac{\text{rise}}{\text{run}} = \frac{y_2 - y_1}{x_2 - x_1}$$

m = slope
 (x_1, y_1) = coordinates of first point in the line
 (x_2, y_2) = coordinates of second point in the line

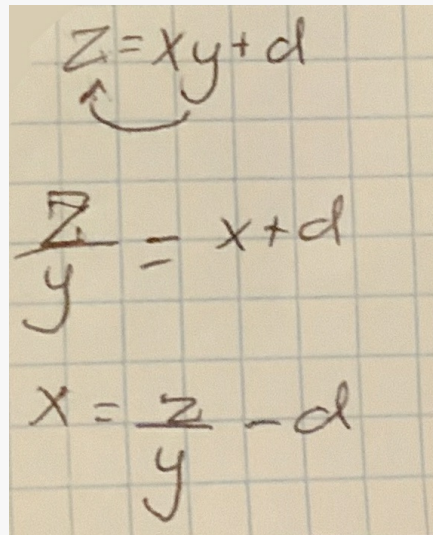
Formulae

$$a = 10, b = 5, c = 15$$

Find d if $d = ab + c$

$$d = 10 \times 5 + 15 = 65$$

Formulae



Trigonometry

Sine O/H

$\theta = \Delta$

Cosine A/H

Tangent O/A

When finding θ (Delta) you use Sin^{-1} , Cos^{-1} and Tan^{-1} . When you type it into the calculator press shift.

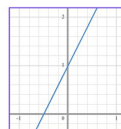
Graphing Lines From Equations

$y = mx + c$ is the general equation of any straight line where m is the gradient of the line (how steep the line is) and c is the y -intercept (the point in which the line crosses the y -axis). $y = mx + c$ is a linear equation.

E.g.

Let's look at the line $y = 2x + 1$.

This has a gradient of 2 and a y -intercept of 1, the coordinate (0, 1).



$$y = mx + c$$

Measurement