Function

function f(x)	solve the equation x-->y
	PITA
	f(g(x))
	problem =>write function
Roots of a Function (x)	x intercept (graph cross x-axis)
	x => f(x)=0
	factor of a question

Quadratic Equations

expanding	FOIL: First Outer Inner Last
factoring	factor constant/multiply, calc coefficent/add
	PITA
solving	f(x)=zero=>factoring=>zero factor
	PITA
	(-b +/ sqrt(b^2 -4ac)) / 2a
	graph the equation
other quadratics problems	
	word question
	charts question (build equation, plug in point)
forms of quadratic	
std form	$y = ax^2 + bx + c$
vertex (h,k), min/max	$y = a(x - h)^2 + k$
a	parabola opening up for positive a
std<=>-vertex	$y = x^2 – 4x – 12$
1) zero, move	$0 = x^2 – 4x – 12$ => $12= x^2 – 4x$
2)add half sq	$12+4= x^2 – 4x +4$
3)sq form	$16= (x-2)^2$
4)vextex	$y= (x-2)^2 -16$

Anaysis in Science: question in scientific context

world problem: identify the variable
chart/graph/table related
scientific situation ==> conclusion, POE strategy

Meaning in context

Plugin number to see
POE
math concept: intercept, slope, and coeffi-cients

SUMMARY

1 Given a function, you put an x value in and get an f(x) or y value out.
2 Look for ways to use Plugging In and PITA on function questions.
3 For questions about the graphs of functions, remember that f(x) = y.
4 If the graph contains a labeled point or the question gives you a point, plug it into the equations in the answers and eliminate any that aren't true.
5 To find a point of intersection, set the equations equal, plug a given point into both equations to see if it works, or graph the equations on your calculator when it is allowed.

SUMMARY - quadratic equation

6 When solving quadratic equations, you may need to FOIL or factor to get the equation into the easiest form for the question task.
7 To solve for the roots of a quadratic equation, set it equal to zero by moving all the terms to the left side of the equation, or use the quadratic formula:
8 The vertex form of a parabola equation is y = a(x – h)2 + k, where (h, k) is the vertex. To get a parabola in the standard form into vertex form, complete the square.

SUMMARY - quadratic equation (cont)

9 Plugging In can also be used on Meaning In Context questions. If a question asks you to identify a part of an equation, plug your own amounts into the equation so you can start to see what is going on.
10 Analysis in Science questions may seem weird, but they can usually be handled with the same strategies as those used for other math questions. Plug In or translate, read the chart or text carefully, and always use Process of Elimination to get rid of answers that don't match the data or don't make sense.
11 If you come across a hard Meaning in Context question or Science question, see if you can eliminate anything and make a guess. If not, find another question to do!

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