

Quadratic Expressions & Trigonometry Cheat Sheet

by NiffyYT via cheatography.com/188450/cs/39308/

Factorising using a common multiple		
5x²+10x	LCM is 5x	
= 5x(x+2)		

Factorising & Expanding Tw	o Squares		
Rewrite as a difference of	x²-16		
two squares			
$= \chi^2 - 4^2$	= (x+4)(x-4)		
Rewrite as a difference of two squares			
16x²-9y²	$= (4x)^2 - (3y)^2$		
= (4x+3y)(4x-3y)			
Difference of squares in the form ab ² x ² -ac ² y ²			
18x²y⁴-98x2z2	= 2x2(9y ⁴ - 49z2)		
$= 2x^2[(3y^2)^2 - (7z)^2]$	$= 2x^2(3y+7z)$ (3y-7z)		

Factorising Monic Trinomials		
Factorise x ²	Find factors of 3,	
+4x+3	summing to 4	
1 & 3	= (x+1)(x+3)	
Factorise x²-	Find factors of 32,	
12x+32	summing to -12	
-4 & -8	= (x-4)(x-8)	

Perfect Squares		
Is 16x²-8²+1 a perfect square?	a=4, b=1	
-2x4x1=8	Yes, (4x- 1) ²	

Algebraic Fractions		
5x+10/5	5(x+2/5	
= (x+2)		
Factorise where possible		
x²-5x+6/x²-7x+12	= (x-3)(x-2)/(x-3)(x-4)	
= (x-2)(x-4)		
Multiply & Dividing	$2x^2/x^2+x \div 4x^2/6x+6$	
$= 2x^2/x(x+1) \div 4x^2/6(x+1)$	= $2x^2/x(x+1) X$ 6(x+1)/4x ²	
=6/2x = 3/x		
Adding & Subtracting		
5/xy + 6/xy - m/xy	5+6-m/xy	
= 11-m/xy		
b. when the denominators are different	1/x - 2/y	
LCD = xy	1 X y/xy - 2 X x/xy	
1/x - 2/y = y/xy - 2x/xy = y-2x/xy		

Trigonometry		
$c^2 = a^2 + b^2$	SOH CAH TOA	
DMS button on calculator	XX*XX'XX''	
Find the missing si	de. x	
tan77* = x/5.9	x = 5.9tan77*	
= 26		
b. x in denominator	r	
tan29*16'=23.1/x	x = 23.1/tan2- 9*16'	
= 41.22		
Find a missing ang	le	
use sin-1 tan-1 or cos-1 with existing sides		
Oissultana and Farm	eli ana	
Simultaneous Equa		
Substitution Metho	d	
y = 3x-7(1)	2x-3y=12 (2)	
Sub (1) into (2)	2x+3(3x+7) = 12	
2x+9x-21=12	11x = 33	
x = 3		
Elimination Method	I	



By **NiffyYT** cheatography.com/niffyyt/

Published 24th June, 2023. Last updated 24th June, 2023. Page 1 of 1. Sponsored by **ApolloPad.com**Everyone has a novel in them. Finish
Yours!
https://apollopad.com

x = 4

2y = -2

y = -1

3x-2y = 14 (1)5x+2y = 18 (2)

8x = 32

sub into (2) 20+2y=18

-20 both sides