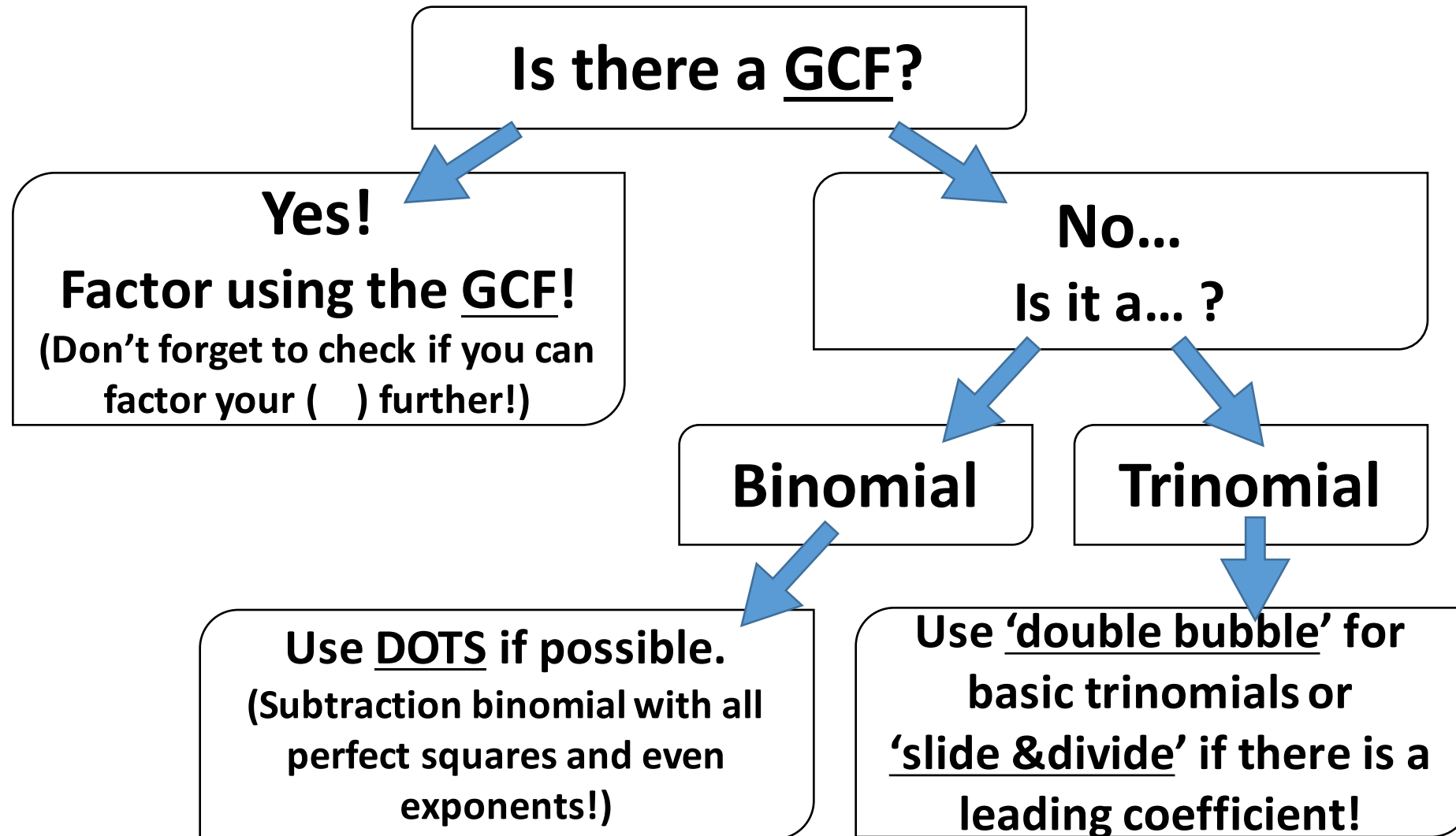


FACTORING POLYNOMIALS



FACTORIZING TRINOMIALS

SIGNS!

$$x^2 + x - 6$$

Bring this sign down to first ()

Tells us whether bubbles *same* or *opposite* signs!
+ means same signs in both bubbles.
- means opposite signs in bubbles!

So this trinomial would have these signs...

$$\begin{array}{cc} (&) \\ (x + &) (x - &) \end{array}$$

FACTORIZING GREATEST COMMON FACTOR

To find # GCF on calc:

MATH NUM 9

Ex) gcd(7, 14)

To find variable GCF:

*Is there a variable in common to all terms?

*Use the one with the smallest exponent!

*~Once you find the GCF,
put it outside ().
~Divide all terms by GCF
to find what goes inside.*

Ex) $3x^2y - 6x$

$GCF = 3x$

$$\frac{3x^2y}{3x} - \frac{6x}{3x}$$


$$3x(xy - 2)$$

FACTORING DOTS

**MUST BE A
SUBTRACTION
BINOMIAL WITH ALL
PERFECT SQUARE
AND EVEN
EXPONENTS**

- ~1) Create 'double bubble' with a + and a -
- ~2) Take the square root all each term.
- ~3) To get sq. root of an exponent, divide it by 2!

Ex) $25x^2 - 49y^4$



Perfect squares:
25 because 5x5
49 because 7x7

$(5x + 7y^2)(5x - 7y^2)$