Hyperbolic Identities

Use the definitions of and to find:

Also:

Hence:

Osborn’s Rule

We can get these identities from the normal sin/cos ones using Osborn’s rule:

Osborn’s Rule:

1. Replace and
2. **Negate** any explicit or implied **product of two sines**.

Solving Equations

To solve equations either use hyperbolic identities or basic definitions of hyperbolic functions.

Examples

1. Solve for all real
2. Solve for all real

Recap: If , find

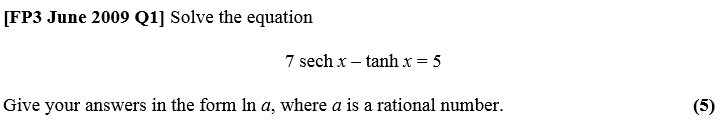
1. If , find the exact value of:

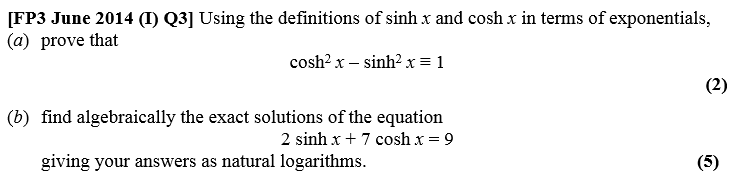
a)

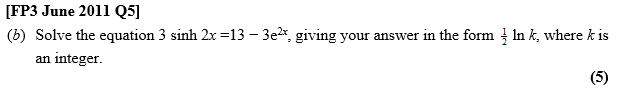
b)

c)

Test Your Understanding







Ex 6C, pg 128