**EXAMPLE 7:** use the definitions the identity to find the values of the remaining five hyperbolic function. 

Sol:

1. 





1. 
2. 
3. 
4. 

***H.W* Ex 8:**

1. 

2. 

3. 

**EXAMPLE 9:** Rewrite the expressions (1 - 5) in terms of exponential and simply the result as much as you can.

1. 

Sol:





2. H.W

3. H.W

4.

Sol:





5. 

Sol:







**EXAMPLE 10:** Prove that 

Sol:

Let  L.H.S



























***H.W* Ex 11:** Prove that 

**EXAMPLE 12:** Prove that 

Sol:

Let 



















 R.H.S

**EXAMPLE 13:** Prove that 

Sol:

Let 

























**EXAMPLE 14:** Use the identities





To show that

1. 
2. 

Sol: a







Sol: b





