4

1)2/ \sqrt{y} :( \sqrt{x} +1/ \sqrt{y})=2/ \sqrt{y} * \sqrt{y}  /( \sqrt{xy} +1)=2/( \sqrt{xy}+1) 2)( \sqrt{x^3} +1/ \sqrt{y^3} )*1/(x-1/y)  :( \sqrt{x}+1/ \sqrt{y} )= ( \sqrt{x^3y^3} +1)/ \sqrt{y^3} *y/(xy-1)* \sqrt{y} /( \sqrt{xy} +1)=( \sqrt{xy} +1)(xy- \sqrt{xy}+1)/(xy-1)( \sqrt{xy} +1)=(xy- \sqrt{xy} +1)/(xy- 1)

3) \sqrt{x}/ \sqrt{y}  :(x-1/y)= \sqrt{x} / \sqrt{y} *y/(xy-1)= \sqrt{xy} /(xy-1)4)2/( \sqrt{xy} +1)+(xy- \sqrt{xy} +1)/( \sqrt{xy} -1)( \sqrt{xy}+1) - \sqrt{xy}/( \sqrt{xy} -1  )( \sqrt{xy} +1)=(2 \sqrt{xy} -2+xy- \sqrt{xy} +1- \sqrt{xy})/(xy-1)=(xy-1)/( )( \sqrt{xy} +1)=(2 \sqrt{xy} -2+xy- \sqrt{xy} +1- \sqrt{xy})/(xy-1)=(xy-1)/( xy-1)=1

5

1)( \sqrt{x^3} + \sqrt{y^3})/(x- \sqrt{xy} +y)=( \sqrt{x} + \sqrt{y} )(x- \sqrt{xy}  +y)/(x- \sqrt{xy} +y)= \sqrt{x} + \sqrt{y} 

2)2xy*(1/ \sqrt{x} -1/ \sqrt{y}):(x-y)= 2xy( \sqrt{y} - \sqrt{x} )/ \sqrt{xy}( \sqrt{x}- \sqrt{y})( \sqrt{x}    + \sqrt{y})=-2 \sqrt{xy}/( \sqrt{x} + \sqrt{y} )  

3)( \sqrt{x} + \sqrt{y} )-2 \sqrt{xy}/( \sqrt{x} + \sqrt{y})=(x+2 \sqrt{xy} +y-2 \sqrt{xy} )/( \sqrt{x} + \sqrt{y}   )=(x+y)/( \sqrt{x} + \sqrt{y} )

4)(x+y)/( \sqrt{x} + \sqrt{y}):( \sqrt{x} - \sqrt{y})/(x-y)=(x+y)(x-y)/( \sqrt{x}- \sqrt{y} )   ( \sqrt{x} + \sqrt{y} )=(x+y)(x-y)/(x-y)=x+y

6

1)(a ^{3/4} +b ^{3/4} )(a ^{3/4} -b ^{3/4} )/( \sqrt{a} - \sqrt{b})=( \sqrt{a^3}- \sqrt{b^3} )/( \sqrt{a}- \sqrt{b} )=   ( \sqrt{a} - \sqrt{b})(a+ \sqrt{ab} +b)/( \sqrt{a} - \sqrt{b})=a+ \sqrt{ab}+b   

2)a+ \sqrt{ab} +b- \sqrt{ab} =a+b

3)(a+b)*5/(a+b)=5