Algebra Proof if $a \neq 0 \wedge b \neq c$ then $\frac{1}{a} \cdot \frac{1}{b} = \frac{1}{ab}$

	Step		**Reason**
1	$ab\left(\frac{1}{a} \cdot \frac{1}{b}\right) = ab\left(\frac{1}{a} \cdot \frac{1}{b}\right)$	1	
2	$ab\left(\frac{1}{a} \cdot \frac{1}{b}\right) = a\left(b \cdot \frac{1}{a}\right)\left(\frac{1}{b}\right)$	2	
3	$ab\left(\frac{1}{a} \cdot \frac{1}{b}\right) = a\left(\frac{1}{a} \cdot b\right)\left(\frac{1}{b}\right)$	3	
4	$ab\left(\frac{1}{a} \cdot \frac{1}{b}\right) = \left(a \cdot \frac{1}{a}\right)\left(b \cdot \frac{1}{b}\right)$	4	
5	$ab\left(\frac{1}{a} \cdot \frac{1}{b}\right) = 1 \cdot 1$	5	
6	$ab\left(\frac{1}{a} \cdot \frac{1}{b}\right) = 1$	6	
7	$\frac{1}{ab} \cdot \left(ab\left(\frac{1}{a} \cdot \frac{1}{b}\right)\right) = \frac{1}{ab} \cdot 1$	7	
8	$\left(\frac{1}{ab} \cdot ab\right)\left(\frac{1}{a} \cdot \frac{1}{b}\right) = \frac{1}{ab} \cdot 1$	8	
9	$1 \cdot \left(\frac{1}{a} \cdot \frac{1}{b}\right) = \frac{1}{ab} \cdot 1$	9	
10	$\frac{1}{a} \cdot \frac{1}{b} = \frac{1}{ab}$	10	