Properties of limits

Thm Spse $a_n \to a$ and $b_n \to b$. Then

$$a_n + b_n \to a + b$$

(and $\lambda a_n \to \lambda a$)

$$\text{and } a_n b_n \to a \cdot b$$

Thm If $a_n \to a \neq 0$,

then $\dfrac{1}{a_n} \to \dfrac{1}{a}$

Corollary If $a_n \to a$

and $b_n \to b \neq 0$ then

$$\dfrac{a_n}{b_n} \to \dfrac{a}{b}$$