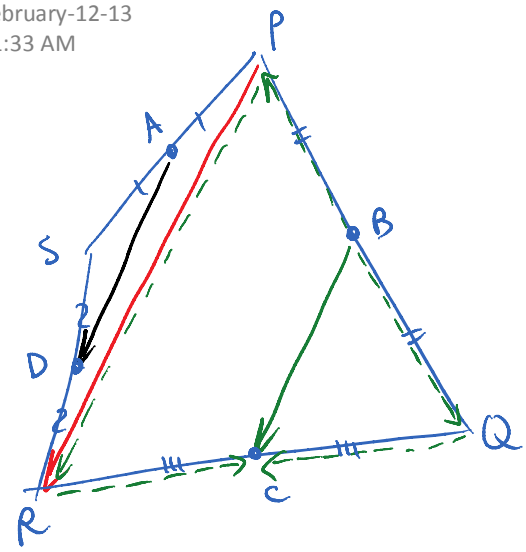
midCh6_5

February-12-13
11:33 AM



same as $\vec{PB}$; same as $\vec{CR}$

① $\vec{BC} = \vec{BQ} + \vec{QC}$ going one way

or ② $\vec{BC} = \vec{BP} + \vec{PR} + \vec{RC}$ going another way

switch $-\vec{PB}$; switch $-\vec{CR}$

add ① + ② $\vec{BC} = \vec{PB} + \vec{CR}$

$\vec{BC} = -\vec{PB} + \vec{PR} + -\vec{CR}$

$2\vec{BC} = \vec{PR}$

ie $\vec{BC}$ and $\vec{PR}$ are parallel

Do the same thing to prove $2\vec{AD} = \vec{PR}$

ie. $\vec{AD}$ and $\vec{PR}$ are parallel

$\therefore$ $\vec{BC}$ and $\vec{AD}$ are parallel and same length.

$\therefore$ ABCD is a parallelogram