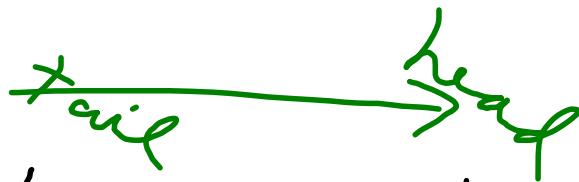


Vectors: size & direction

ex: vel, accel, forces

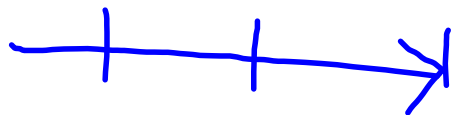
represented by an arrow



- a) - length represents size
- b) - orientation of head represents direction

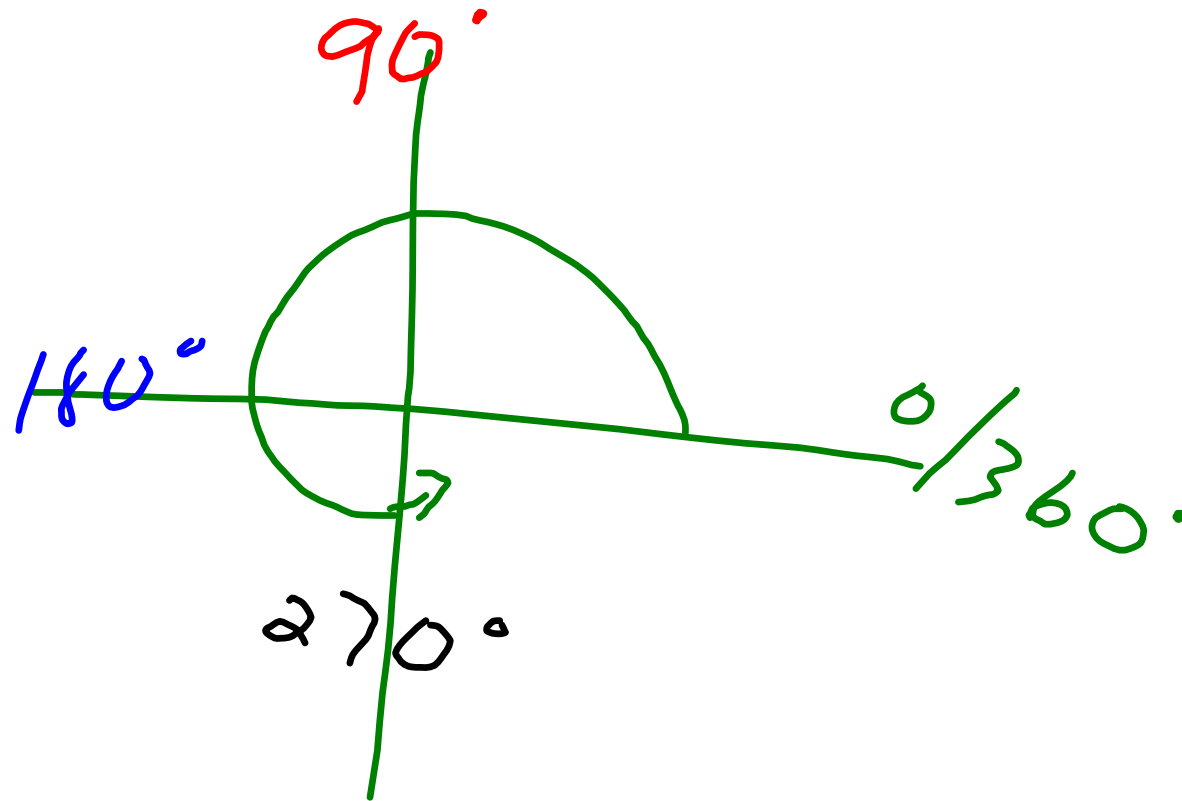
a) scale: 1 cm of length = 1 N of Force

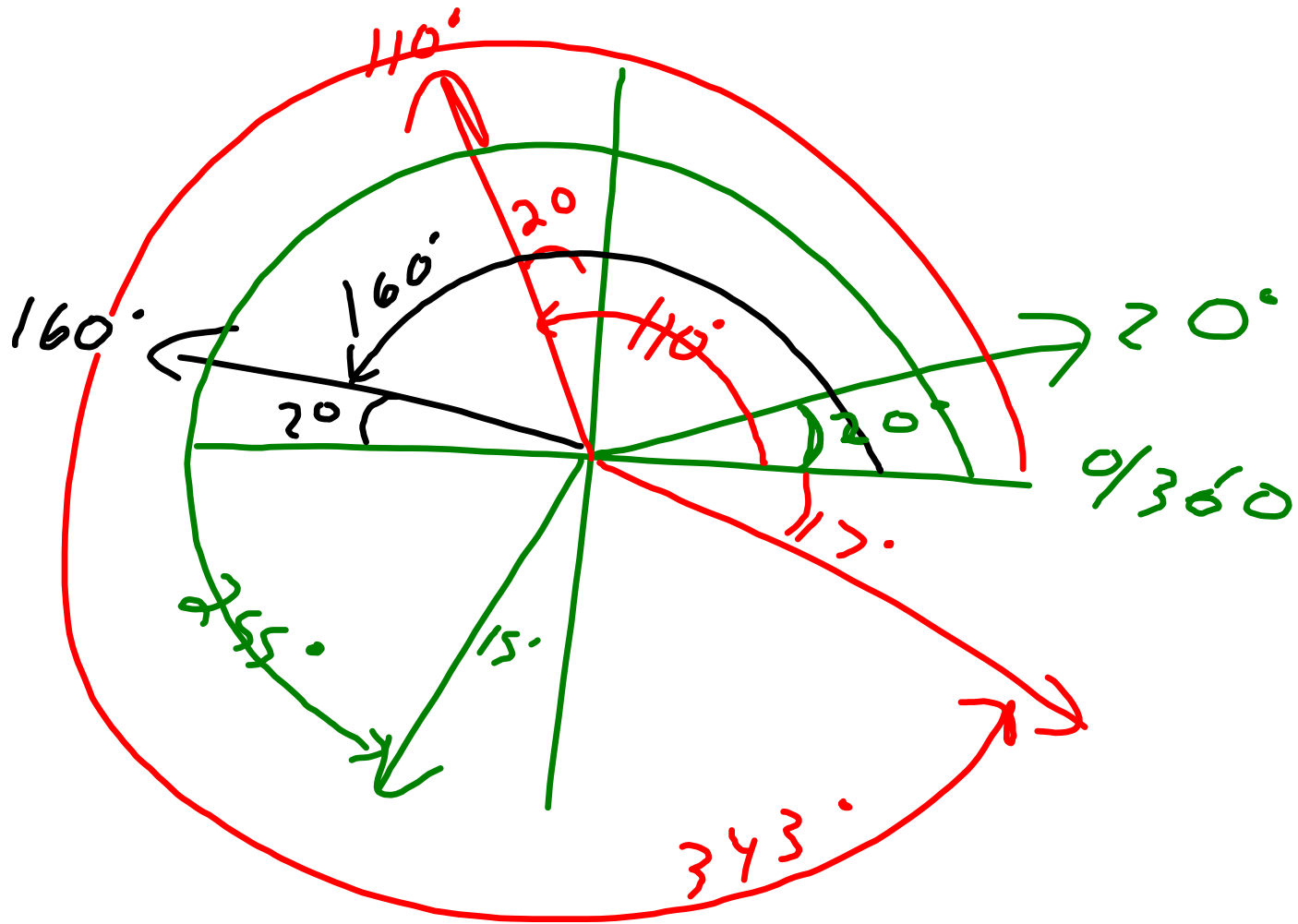
10 cm 20 cm 30 cm



$$30 \text{ cm} = 30 \text{ N}$$

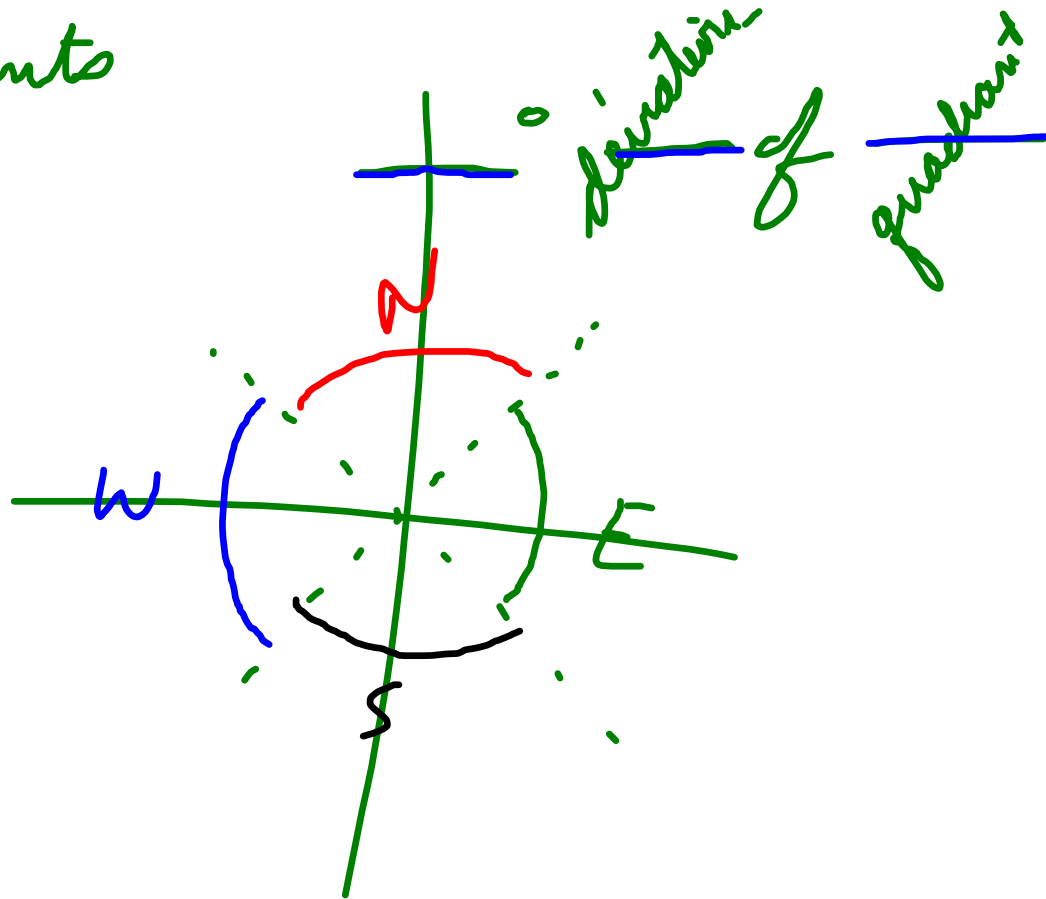
2) direction

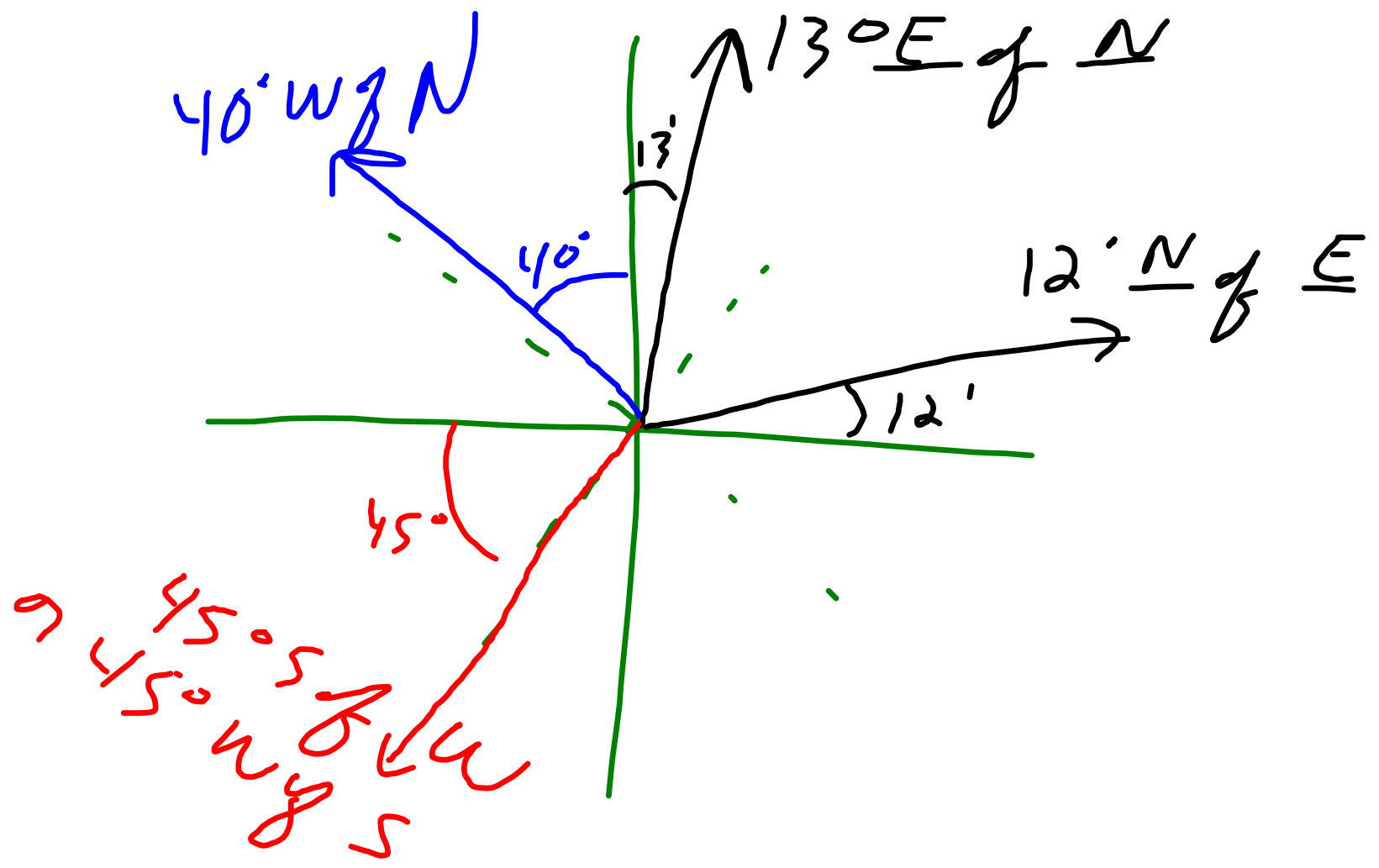




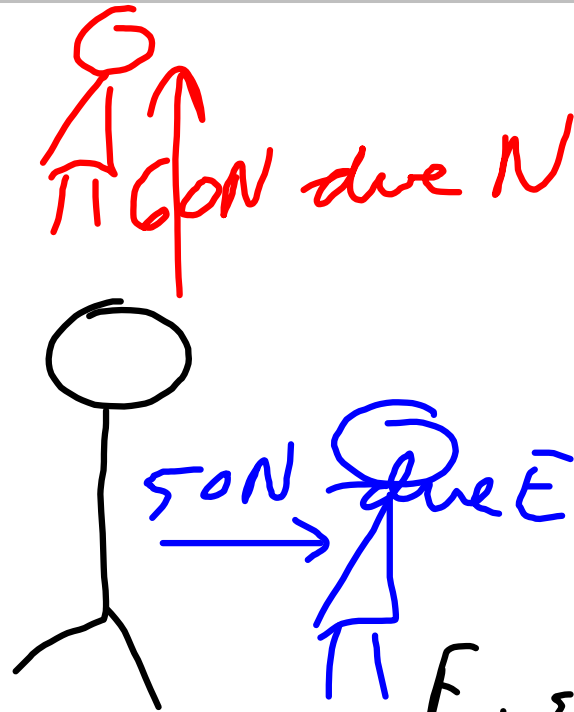
0/360

quadrants





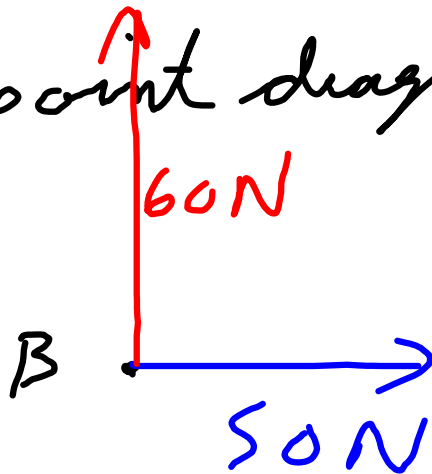
① picture



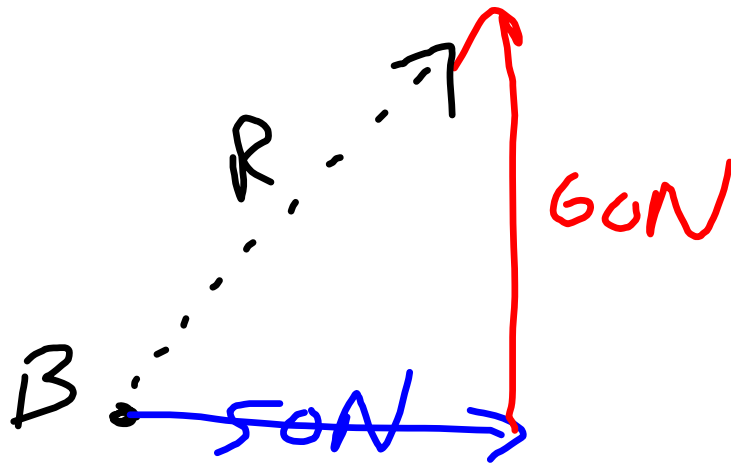
② $F_1 = 50\text{N}$ 0°
 $F_2 = 60\text{N}$ 90°
 $R = ?$

F_1 & F_2 are Components
 $R =$ Resultant
(overall effect)

③ point diagram



④ Vector diagram
uses rules of vector addition



Rules for Vector Addition

- Draw the first vector (scale and direction)
- Start the second vector at the head of the first and draw it. (repeat if more than two)
- Start the resultant at the tail of the first and end it at the head of the second (last).
Measure its direction for the tails of the first and resultant.

