

# Exemple 4a

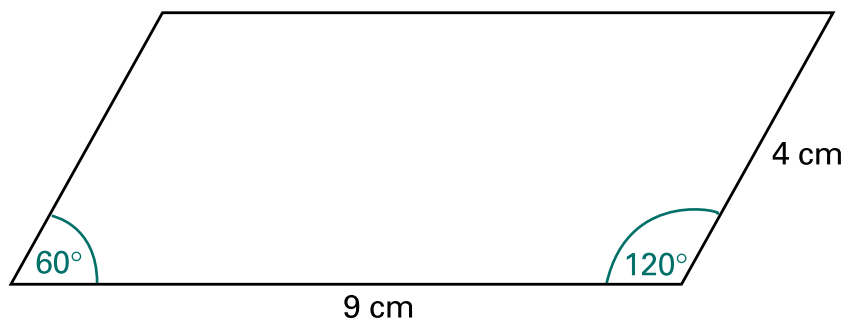
a) Construct a parallelogram that is congruent to this one.



## Strategy

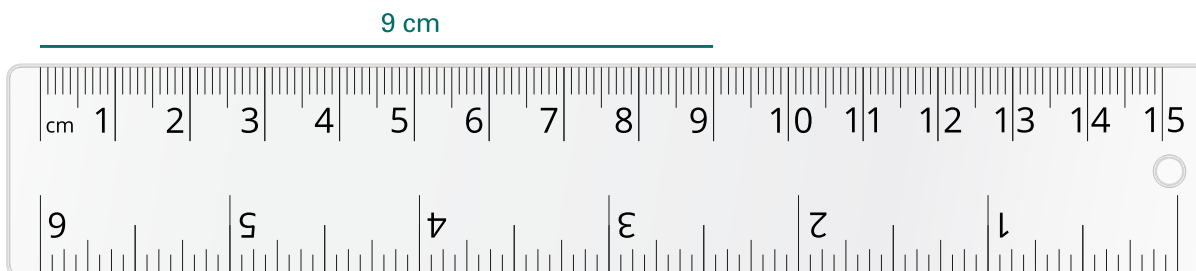
### Construction of a parallelogram using a ruler, a protractor and a compass

I use a ruler, a protractor and a compass to measure the sides and the angles of the parallelogram. I record my data on the parallelogram.

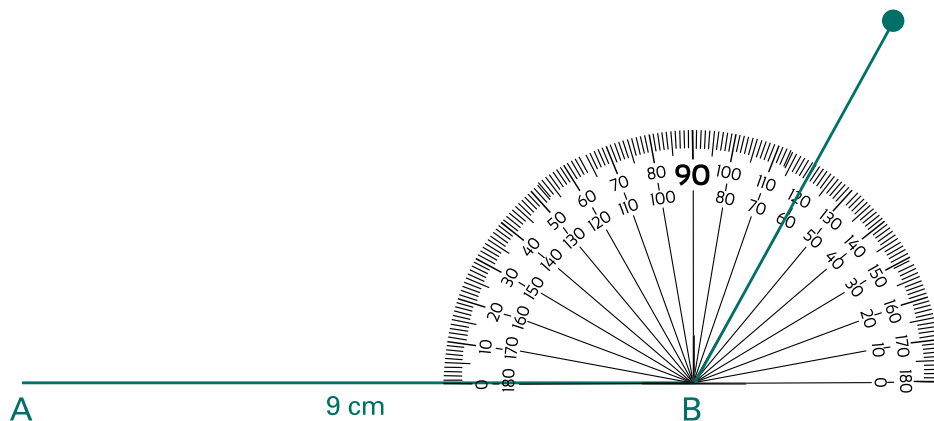


Here are the steps to follow to construct my parallelogram:

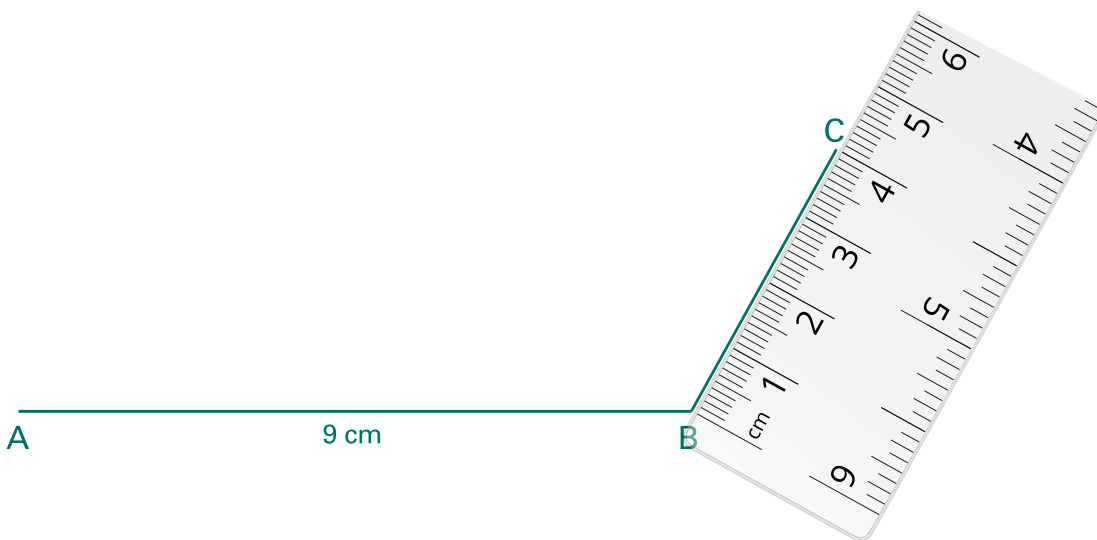
1. Using a ruler, I draw a 9 cm segment (segment AB), which is the parallelogram's base.



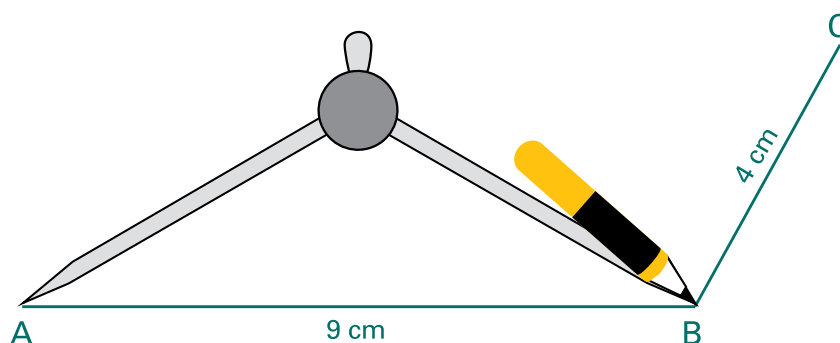
2. Using the protractor, I construct the obtuse angle of  $120^\circ$  from point B of the base of the parallelogram, using the outside scale, in order to draw one of the oblique 4 cm segments.



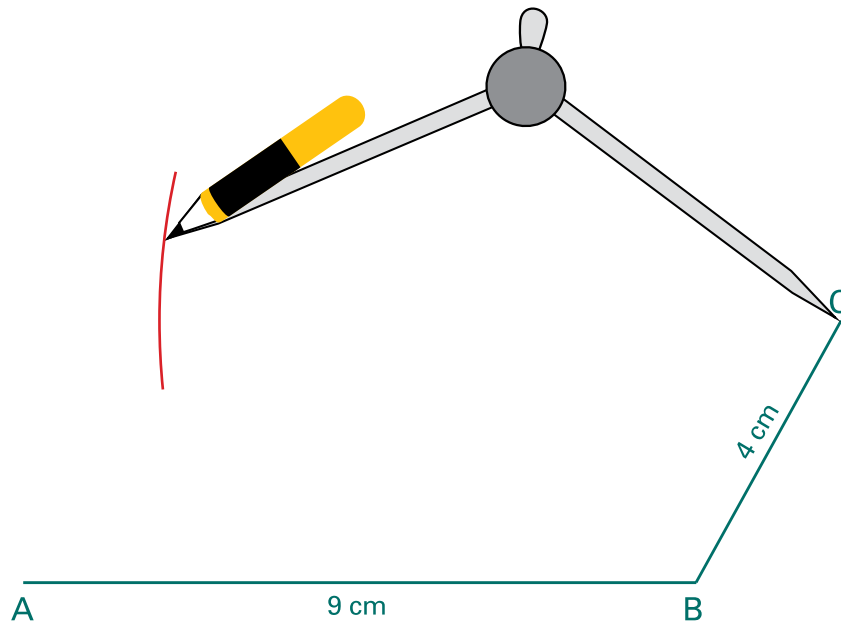
3. From point B, I draw a 4 cm segment, which is the measurement of one of the oblique sides of the parallelogram.



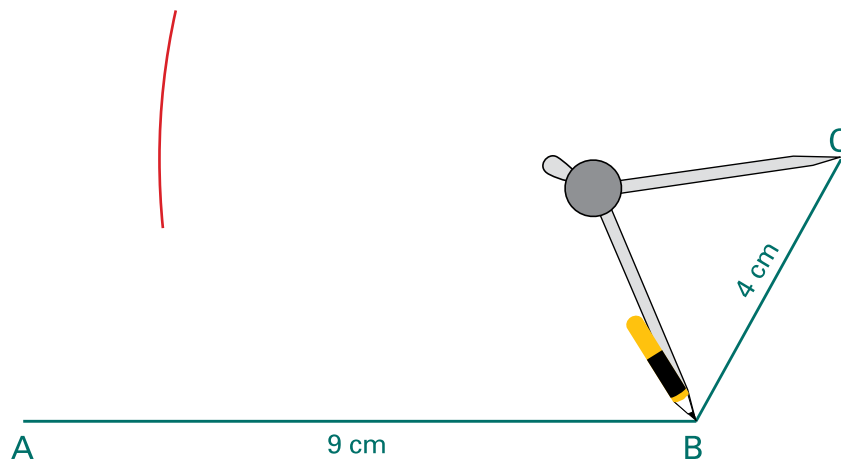
4. I set the compass for the length of 9 cm and place it on both ends of the base.



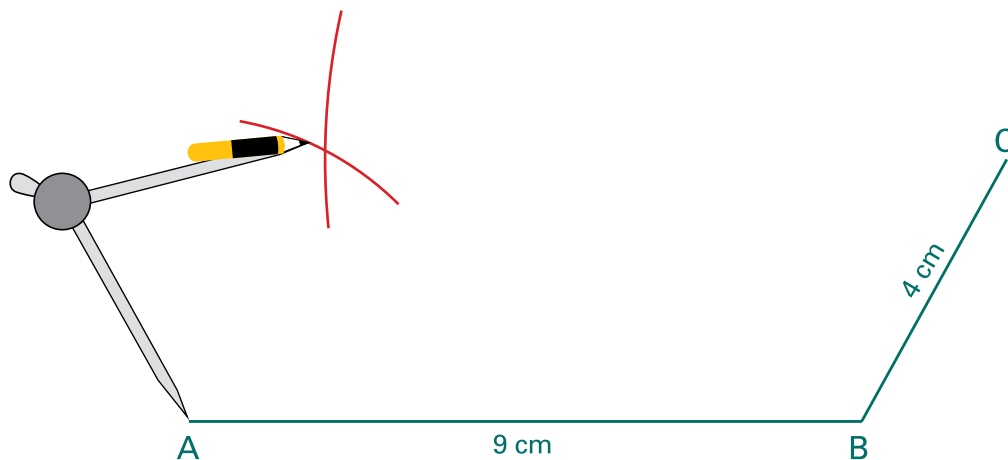
5. I place the compass on vertex C and draw an arc to mark the end of the adjacent side.



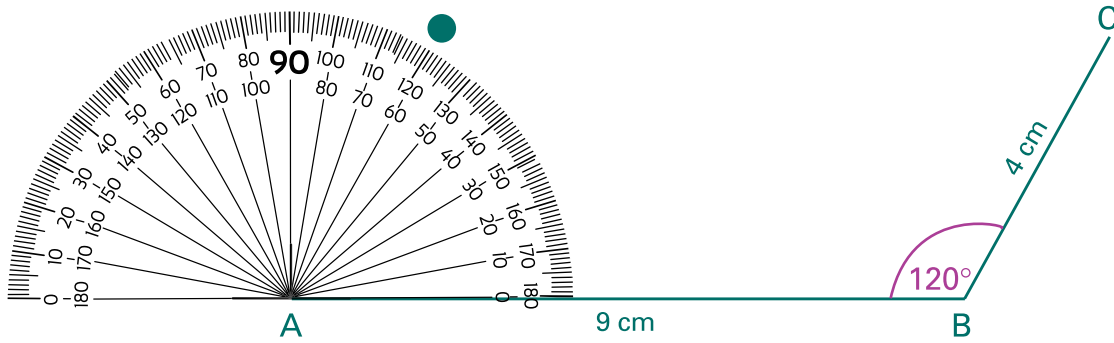
6. I set the compass for the length of 4 cm (oblique side).



7. I place the compass on vertex A and draw an arc that intersects with the first one.



8. Using the protractor, I check that angle A is  $60^\circ$ .



9. Using a ruler, I draw the 2 segments by connecting them to the arcs' point of intersection. This parallelogram is congruent to the parallelogram at the beginning since their angles and sides are congruent. I can also superimpose this parallelogram on the original one..

