

# Interior Angles Measurement

Short-answer questions involving length, angle, and area.

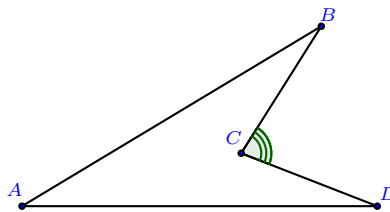
Geogebra link: <https://tube.geogebra.org/m/zrapvzpz>

**Problem 1** Measure the interior angles of quadrilateral  $ABCD$  above.

- (a)  $m\angle A =$   degrees.
- (b)  $m\angle B =$   degrees.
- (c)  $m\angle C =$   degrees.
- (d)  $m\angle D =$   degrees.
- (e)  $m\angle A + m\angle B + m\angle C + m\angle D =$  .

**Hint:** Be sure to measure interior angle as an amount of turning between the two sides of the angle.

**Problem 2** Use the measurements from the previous problem, to computer the measure of the marked angle below.

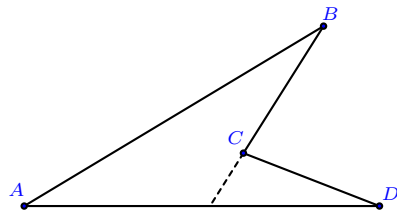


The marked angle should measure  degrees.

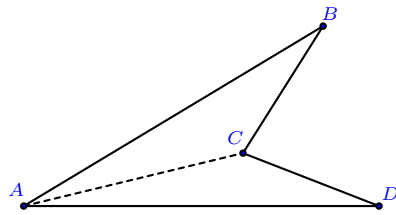
**Problem 3** In order to explain why the sum of the interior angles should be  $360^\circ$ , Bart and Brad each triangulated the figure as shown below.

Author(s): Brad Findell

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Brad's figure



Bart's figure

### Multiple Choice:

- (a) They are both correct.
- (b) Only Brad is correct.
- (c) Only Bart is correct. ✓
- (d) Neither of them are correct.

Explain your reasoning.

**Free Response:** **Hint:** In Bart's triangulation, the interior angles of the quadrilateral are composed only of interior angles of the triangular pieces. But in Brad's figure, a new angle has been created between  $A$  and  $D$ , and part of interior angle  $C$  has been lost.